

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION NO. 687 OF 2023**

IN THE MATTER OF:

IN RE: AIR QUALITY INDEX IN VARIOUS CITIES

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ATTESTED

NOTARY PUBLIC JAIPUR
(RAJ.) INDIA

04 DEC 2023

Through its Counsel

**Department of Environment
State of Rajasthan**

(Signature)
DR. JAYSHRI KALA
GIC-AIR
Quality Management Cell

(Signature)
Nishant Awana
Advocate

6/2, Lower Ground Floor, Jangpura-B, Delhi

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nishantawana@outlook.com

Date: 04.12.2023

Place: Delhi

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION NO. 687 OF 2023

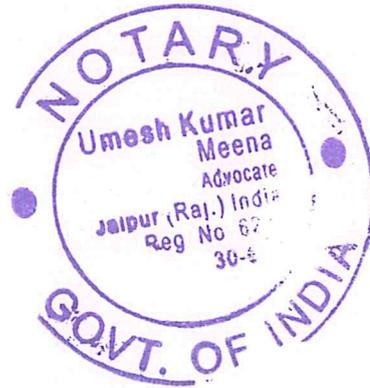
IN THE MATTER OF:

IN RE: AIR QUALITY INDEX IN VARIOUS CITIES

ACTION TAKEN REPORT (ATR) ON BEHALF OF DEPARTMENT
OF ENVIRONMENT, STATE OF RAJASTHAN

MOST RESPECTFULLY SHOWETH:

1. The instant Action Taken Report is being filed on behalf of Department of Environment, State of Rajasthan in compliance of Order dated 22.11.2023 passed by this Hon'ble Tribunal in the above noted matter.
2. It is most humbly submitted that cities in the State of Rajasthan mentioned in OA/687/2023 where Air Quality Index (AQI) has dipped "Severe" "Very Poor" & "Poor" from 20.10.2023-01.11.2023 are as mentioned below.
 - a. Hanumangarh,
 - b. Sriganganagar,
 - c. Bikaner,
 - d. Bundi,
 - e. Bhiwadi,
 - f. Bharatpur,
 - g. Churu,
 - h. Dausa,
 - i. Jhunjhunu,



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- j. Kota,
- k. Tonk.

AQI of last week of these cities shows improvement in air quality. Daily AQI data of these cities from 01.11.2023 till 30.11.2023 are annexed herewith and marked as **ANNEXURE – 1**.

3. As observed and noted in the previous ATR, Weather phenomena, temperature inversion are major cause of deterioration in air quality. In addition to above, Parali/stubble burning and Diwali festival have also been identified, as major contributing source of pollution for deterioration of air quality.
4. As per Indian Council of Agriculture Research (ICAR) Bulletin No. 76 (which monitors stubble burning cases through satellite imagery) issued on 29.11.2023, Crop residue burning events have occurred and recorded in Districts of Rajasthan. In fact, on 29.11.2023, only 1 incident of stubble burning was recorded in the entire state of Rajasthan, i.e., District Chittorgarh, with 0-5 w/m² fire intensity. It is also observed from the bulletin that fire residue burning events are decreased in Rajasthan from 24.11.2023 onwards. A copy of Indian Council of Agriculture Research (ICAR) Bulletin No. 76 (which monitors stubble burning cases through satellite imagery) issued on 29.11.2023 annexed herewith and marked as **ANNEXURE –2**.
5. In the State of Rajasthan, 5 cities namely Jaipur, Jodhpur, Kota, Udaipur & Alwar have been identified, as non-attainment cities by Central Pollution Control Board in the year 2019, on the basis of annual average of PM-10

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04 DEC 2023

concentration of these cities for five years from 2011 to 2015 have been found higher than the prescribed standards.

6. Vide an Order dated 22.11.2023, this Hon'ble Tribunal had directed the States to submit the details of extend of fund received and fund utilized. Details of funds utilisation of all 5 non-attainment cities is enclosed herewith and marked as ANNEXURE – 3.
7. It is submitted that the State Government is committed to maintain better air quality in the entire of State of Rajasthan and is taking concrete remedial measures to curb and control the air quality of all the districts.

Department of Environment
State of Rajasthan

Through its Counsel

G40J

DR. JAYSHRI KALA
GIC-AIR
Quality Management C

Nishant Awana
Advocate

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Date: 04.12.2023

Place: Delhi



WITNESSED

(Signature)

NOTARY PUBLIC JAIPUR
RAJ. INDIA

04 DEC 2023

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
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IN THE MATTER OF:

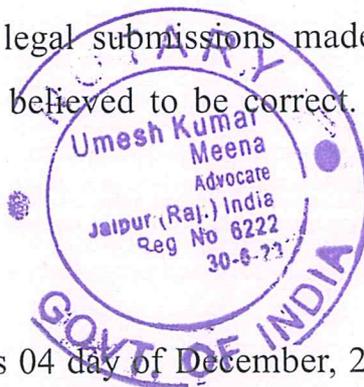
IN RE: AIR QUALITY INDEX IN VARIOUS CITIES

AFFIDAVIT IN SUPPORT

I, Dr. Jayshri Kala w/o Sh. Satish Pipralia, aged about 45 years, working as Group In-charge Air Quality Management Cell with RSPCB available at 4-Institutional Area, Jhalana Doongri, presently at Jaipur Rajasthan, do hereby solemnly affirm and declare as under:

1. That I am the Officer in Charge for the above noted matter and have been duly authorized in this regard. I am well conversant with the facts of the case, and, hence, competent to affirm this affidavit.

2. That the contents of the accompanying ATR have been drafted by my counsel under my instructions. Facts stated therein are true to my knowledge and the legal submissions made therein are based on the advice received and believed to be correct. Nothing material has been concealed therein.



(Signature)

DEPONENT

Verification:

Verified at Jaipur on this 04 day of December, 2023 that the contents of the above affidavit are true and correct to my knowledge and belief and as per the official records available. I say that no part of it is false and nothing material has been concealed therefrom.

DR. JAYSHRI KALA
GIC-AIR
Quality Management Cell

WITNESSED

(Signature)

DEPONENT

NOTARY PUBLIC JAIPUR
04 DEC 2023

DR. JAYSHRI KALA
GIC-AIR
Quality Management Cell

ANNEXURE -1 7

1120

Date	Bharatpur	Bhilwara	Bikaner	Bundi	Churu	Dausa	Hanumangarh	Jhunjhunu	Sriganganagar	Tonk	Kota(Vigyan Nagar)	Kota (Nayapura)	Kota (shrinathpura m)	Bhiwadi
01.11.2023	265	146	283	196	221	235	418	276	344	254	265	224	308	315
02.11.2023	270	190	284	181	310	203	413	279	381	245	283	246	316	398
03.11.2023	340	157	280	200	353	278	388	244	390	239	206	195	289	447
04.11.2023	379	167	251	167	344	333	378	258	425	246	224	195	254	489
05.11.2023	338	155	239	230	343	257	338	260	332	223	167	207	221	620
06.11.2023	315	136	207	186	262	300	342	249	396	229	165	190	231	397
07.11.2023	246	143	212	229	285	291	388	224	328	251	196	196	260	413
08.11.2023	283	175	284	198	268	275	395	156	355	255	205	203	281	680
09.11.2023	173	158	203	201	113	283	349	137	301	248	223	229	272	384
10.11.2023	181	115	142	139	136	219	214	149	161	256	250	222	307	256
11.11.2023	211	96	232	124	191	200	167	154	190	163	161	130	189	221
12.11.2023	297	227	234	197	277	192	277	248	231	247	312	285	635	589
13.11.2023	371	183	254	130	316	243	364	304	304	335	249	230	343	365
14.11.2023	405	193	349	176	404	316	392	397	347	306	221	244	332	376
15.11.2023	356	213	419	266	468	240	306	453	369	358	280	280	335	343
16.11.2023	327	274	301	295	427	351	423	401	407	361	326	327	351	501
17.11.2023	299	297	409	283	345	317	416	274	379	360	317	295	351	318
18.11.2023	264	288	331	283	306	264	383	194	457	335	338	312	359	303
19.11.2023	224	267	309	257	263	303	393	178	415	340	316	300	355	313
20.11.2023	243	289	378	304	361	300	374	241	379	350	321	312	357	363
21.11.2023	227	260	398	274	425	344	348	351	251	346	323	306	349	318
22.11.2023	338	210	278	225	322	366	417	217	191	349	260	239	322	387
23.11.2023	346	214	268	244	216	319	366	205	202	328	292	245	341	338
24.11.2023	357	236	253	256	287	352	446	299	265	355	292	273	335	390
25.11.2023	360	245	347	251	321	348	411	352	199	353	285	253	333	373
26.11.2023	318	192	228	218	207	328	443	254	211	306	265	245	327	395
27.11.2023	111	127	225	80	230	178	417	258	201	214	152	129	247	332
28.11.2023	214	96	398	82	157	101	330	116	165	194	104	84	157	277
29.11.2023	287	205	333	233	298	238	293	276	111	310	263	254	326	350
30.11.2023	124	218	377	197	267	232	360	261	129	307	239	242	195	375

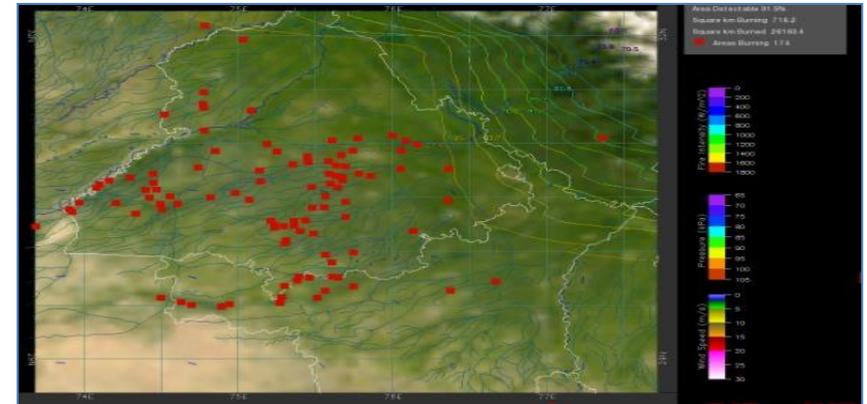
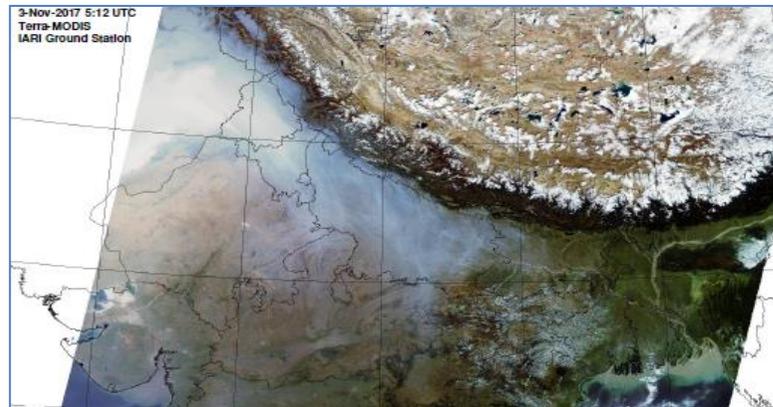


**Bulletin
No. 76**

**Events Date:
29-Nov-2023**

**Issued on:
29-Nov-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**

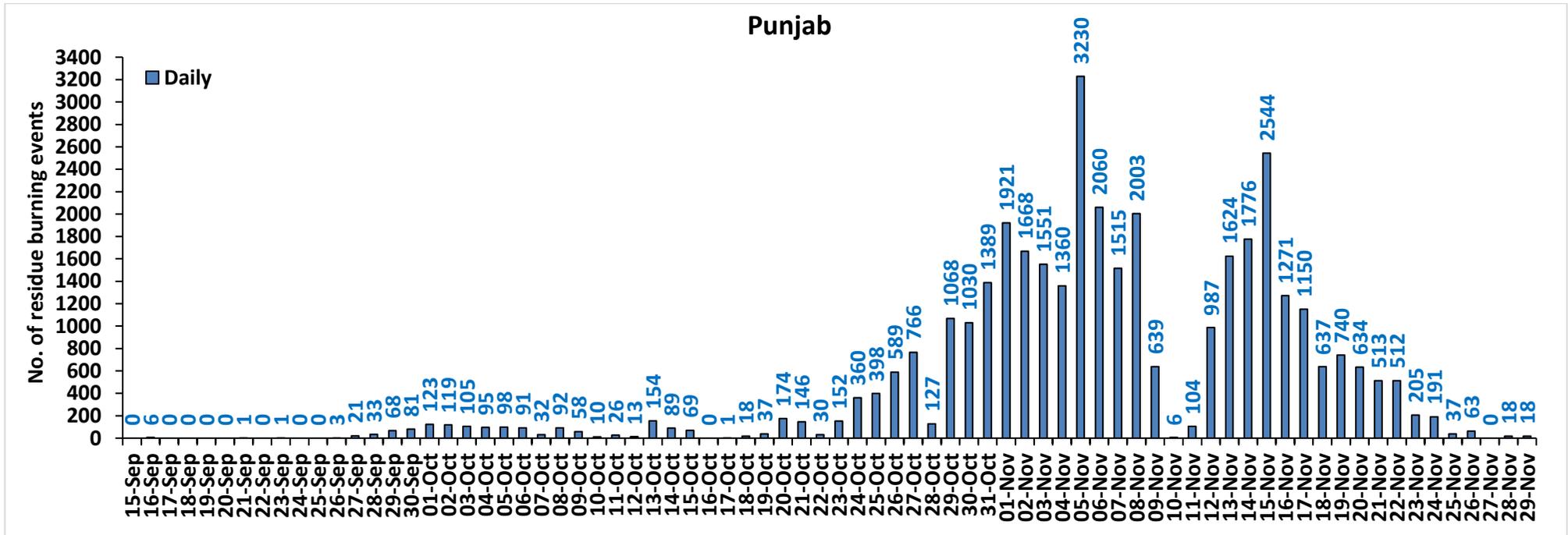
<http://creams.iari.res.in>



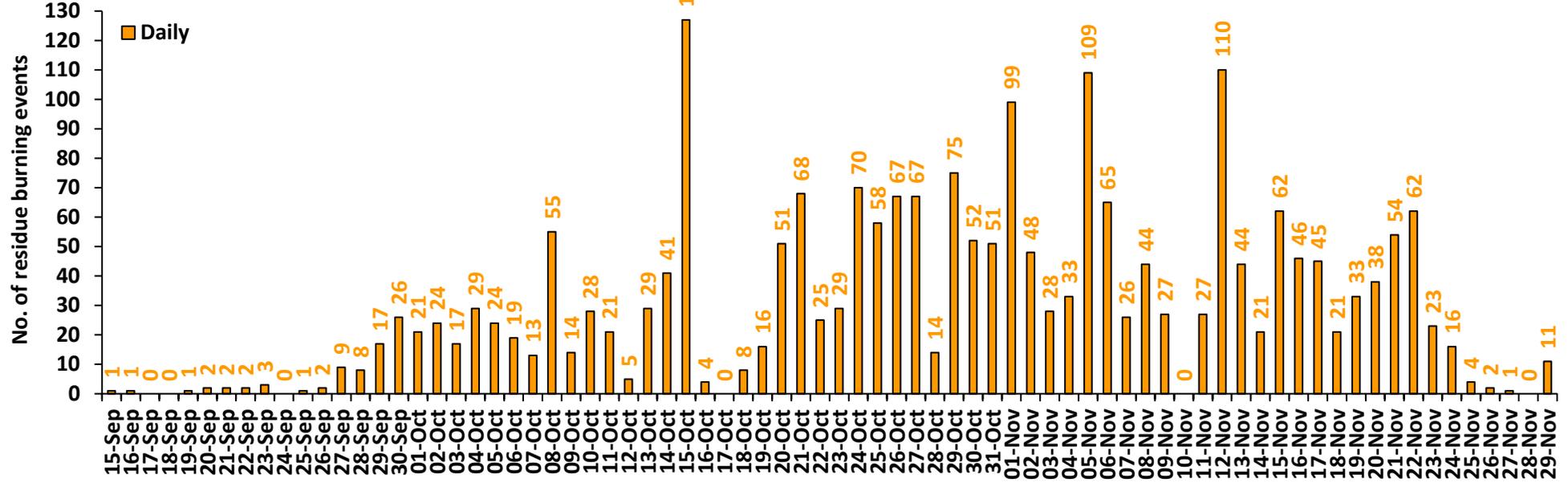
Highlights for 29-Nov-2023

- 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 **214** residue burning events in the six study States on 29-Nov-2023.
- The state wise events detected on 29-Nov-2023 were **18** in Punjab, **11** in Haryana, **173** in UP, **00** in Delhi, **01** in Rajasthan and **11** in MP.
- Total **57209** burning events were detected in the six states between 15-Sept-2023 and 29-Nov-2023, which are distributed as **36650**, **2296**, **3985**, **05**, **1773** and **12500** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.
- Detection of residue burning events was hampered by the presence of clouds over Madhya Pradesh state.

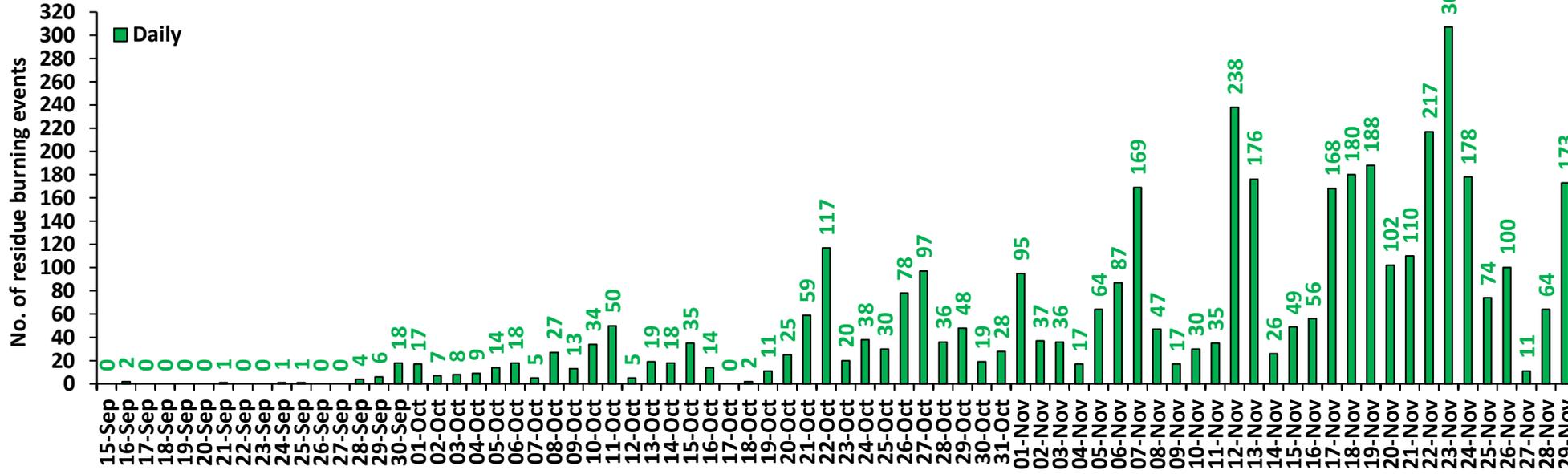
Temporal distribution of rice residue burning events for the study States in 2023



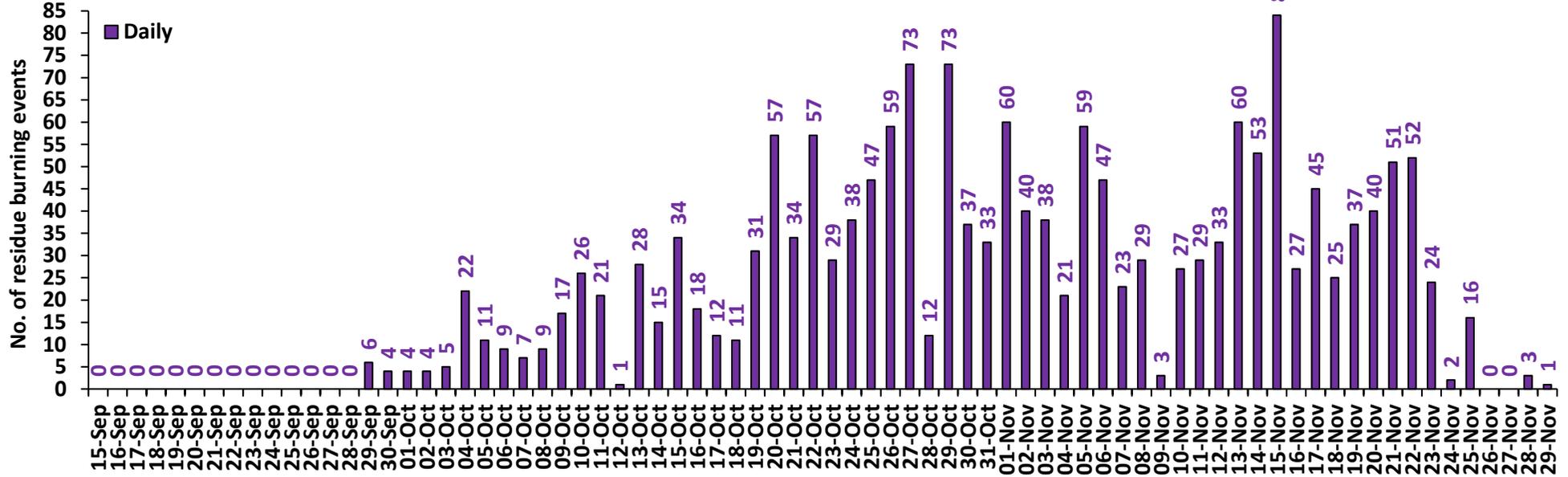
Haryana



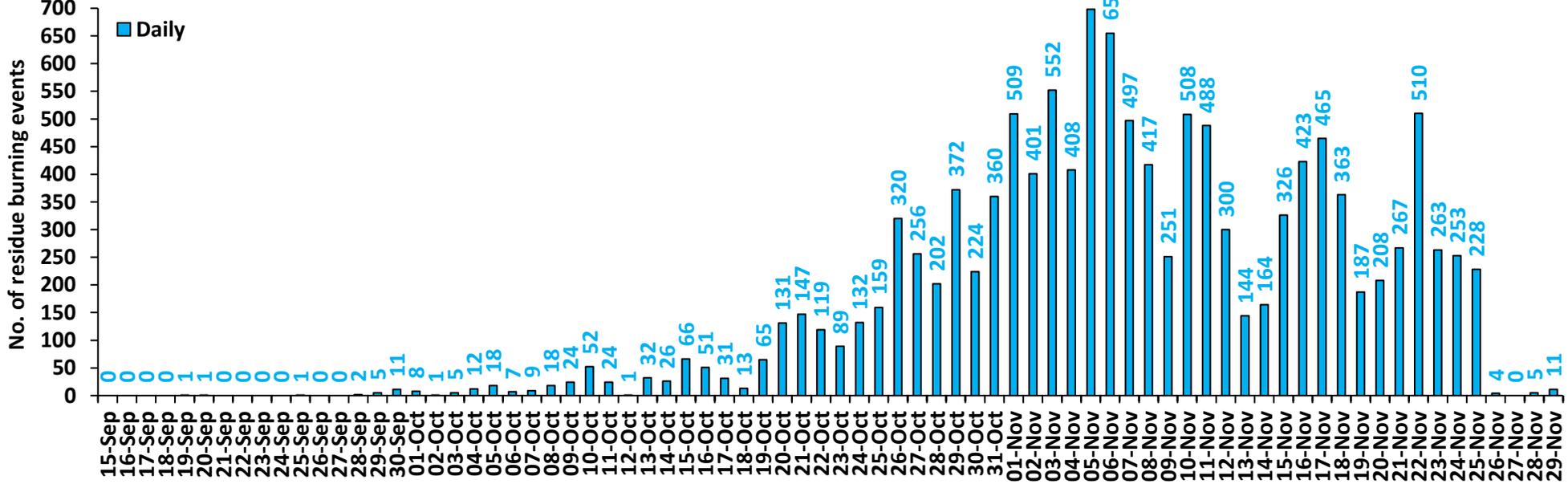
Uttar Pradesh



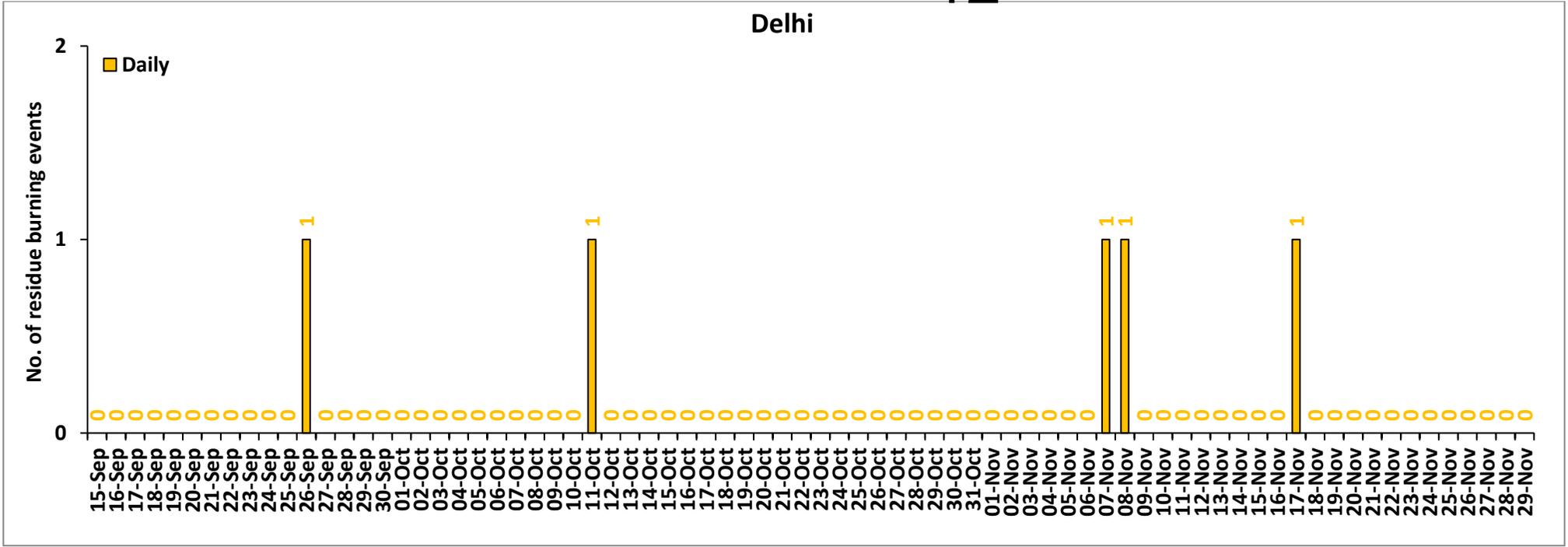
Rajasthan



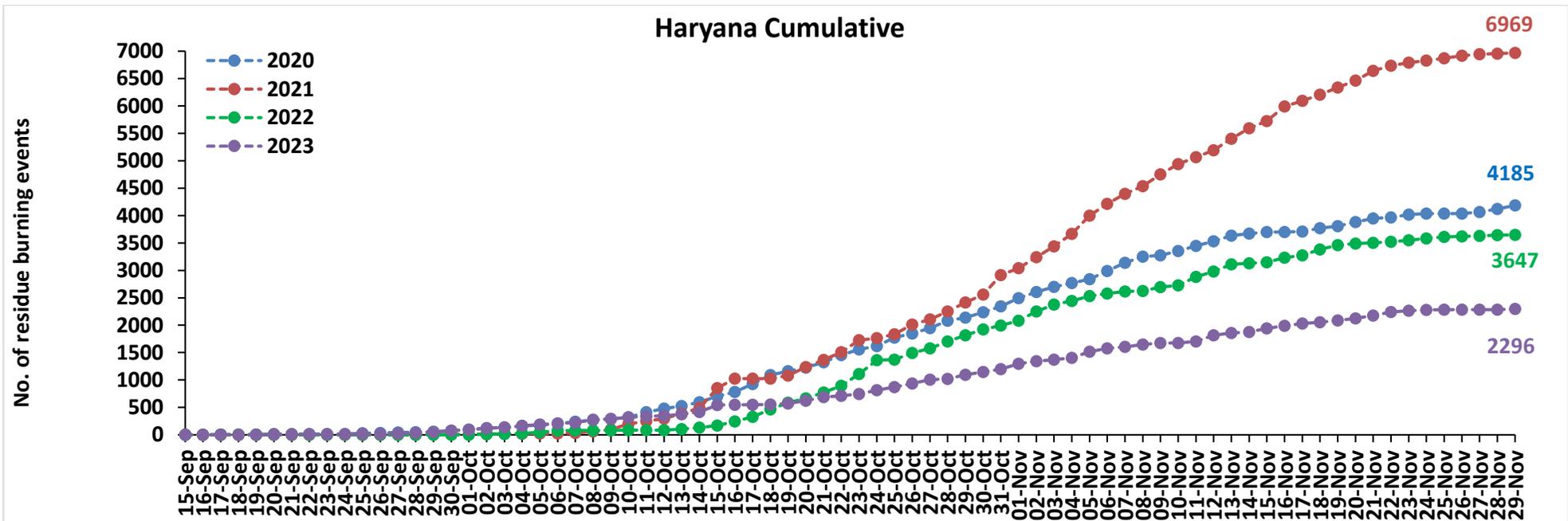
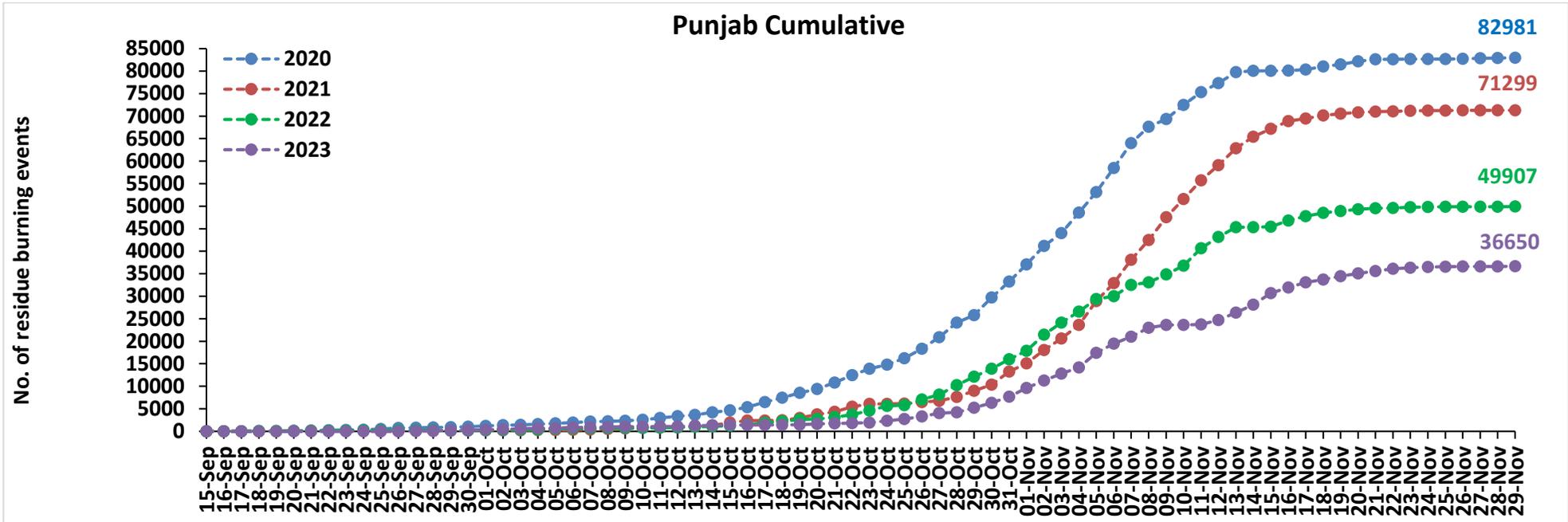
Madhya Pradesh

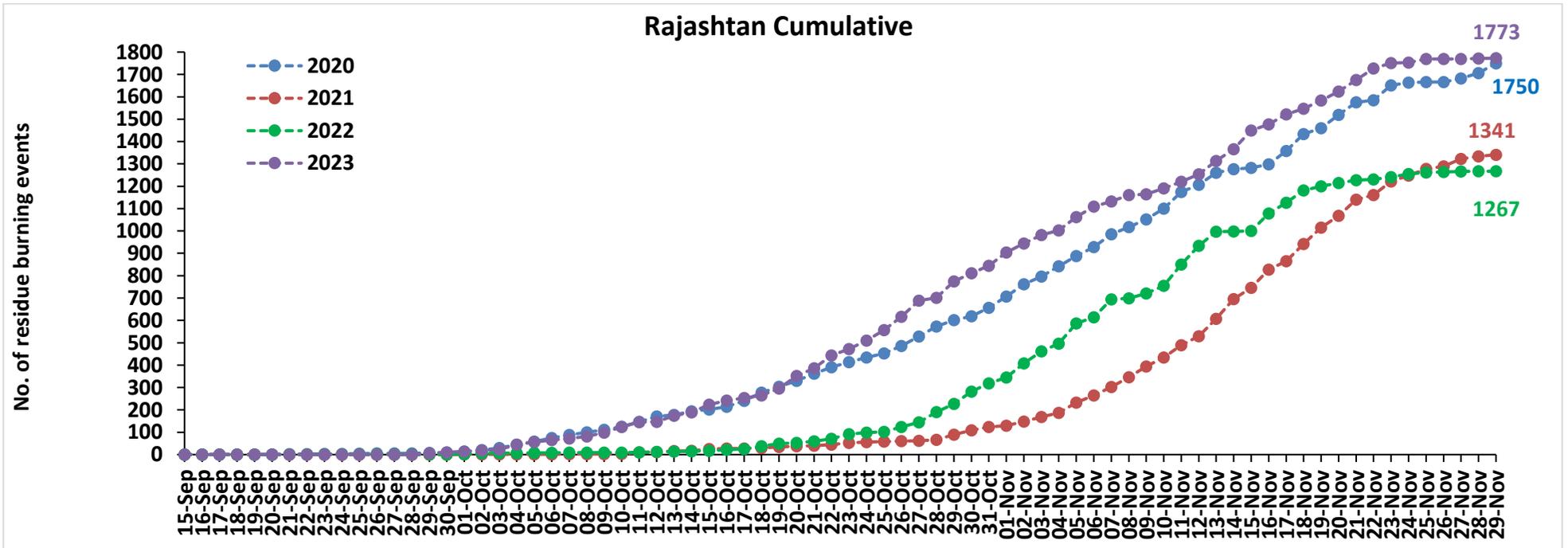
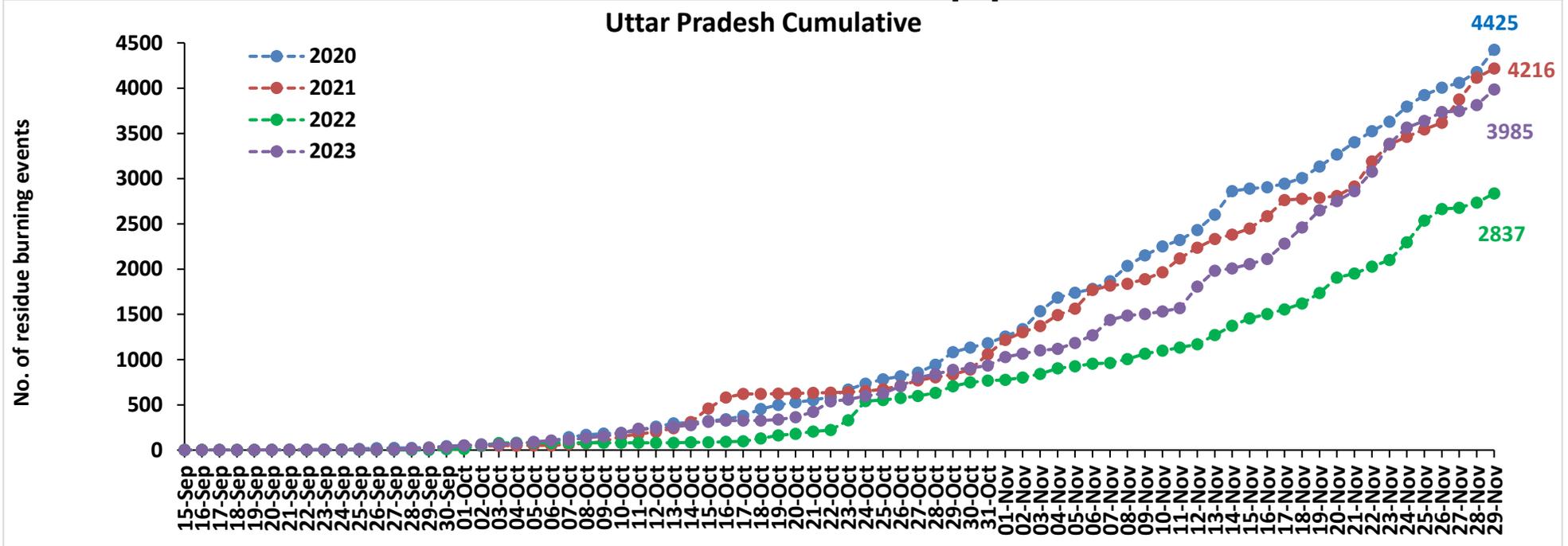


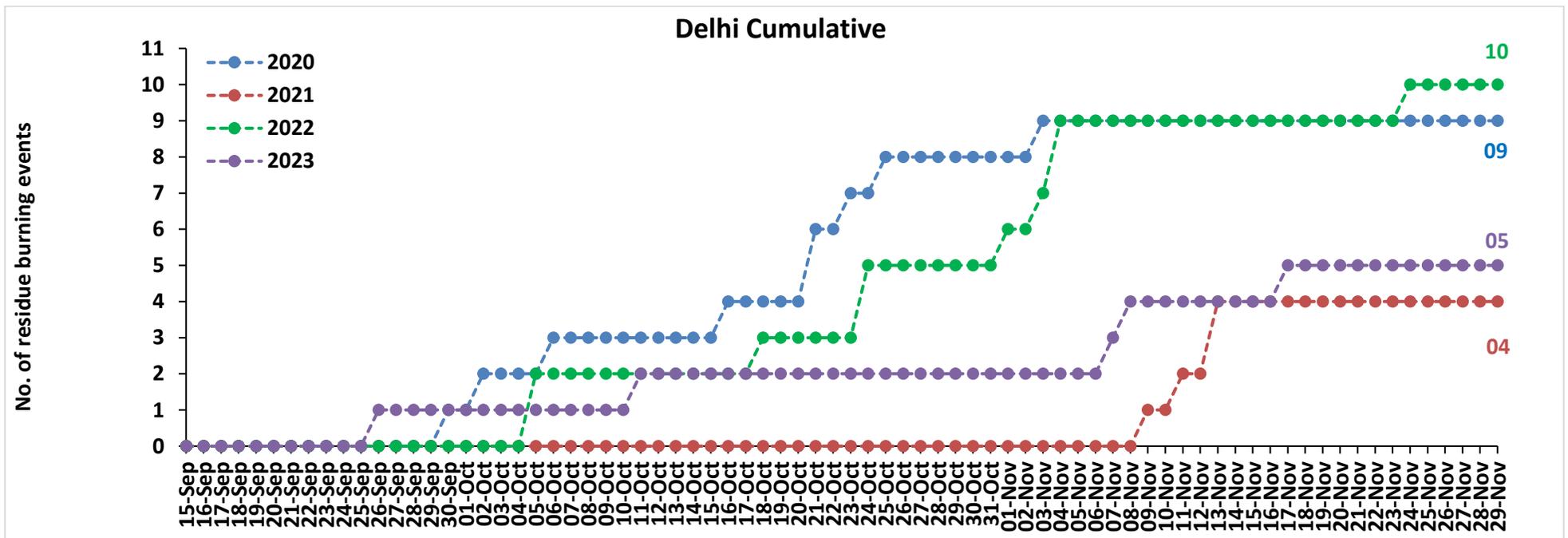
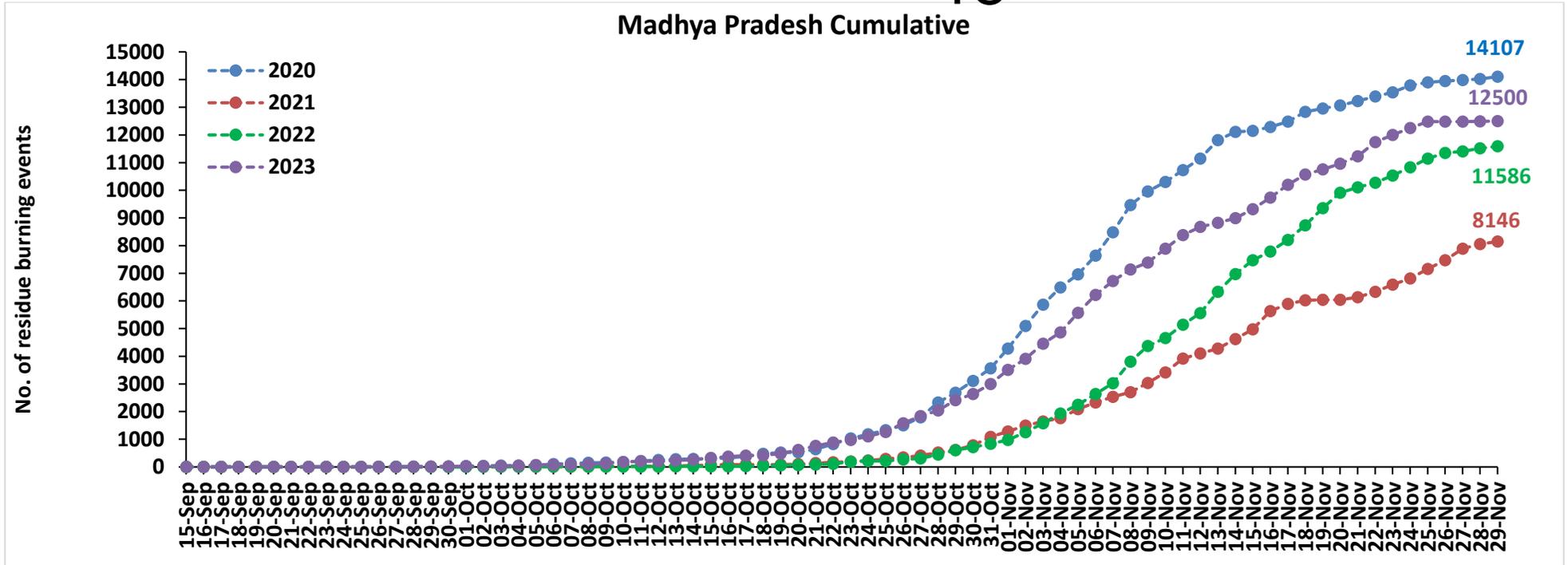
Delhi



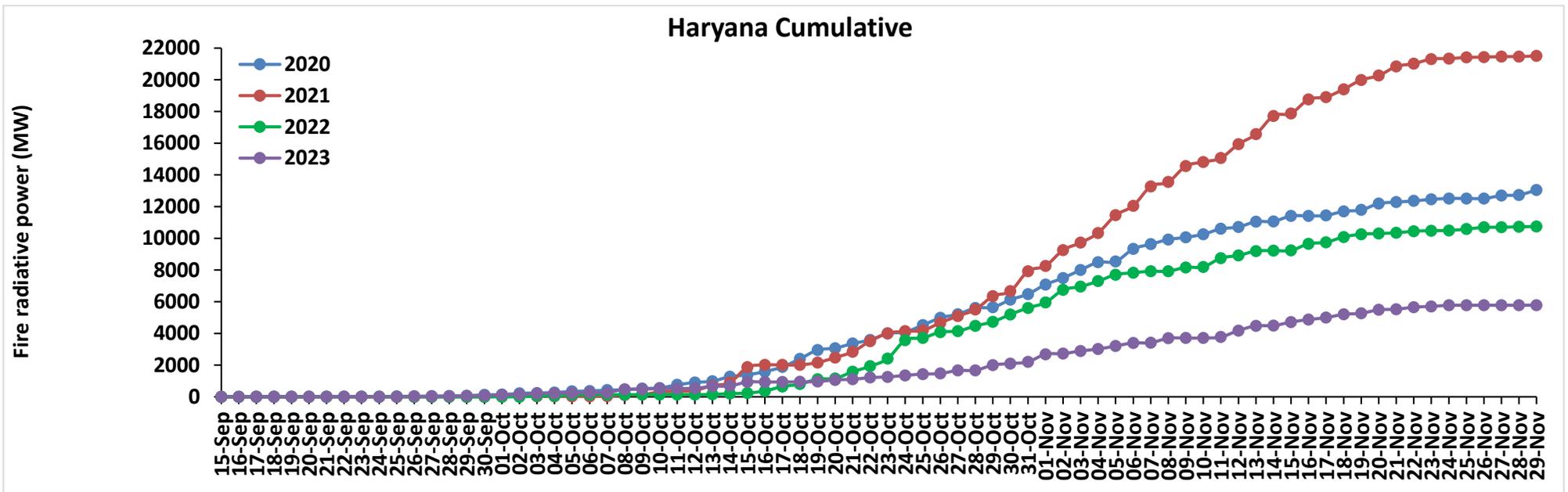
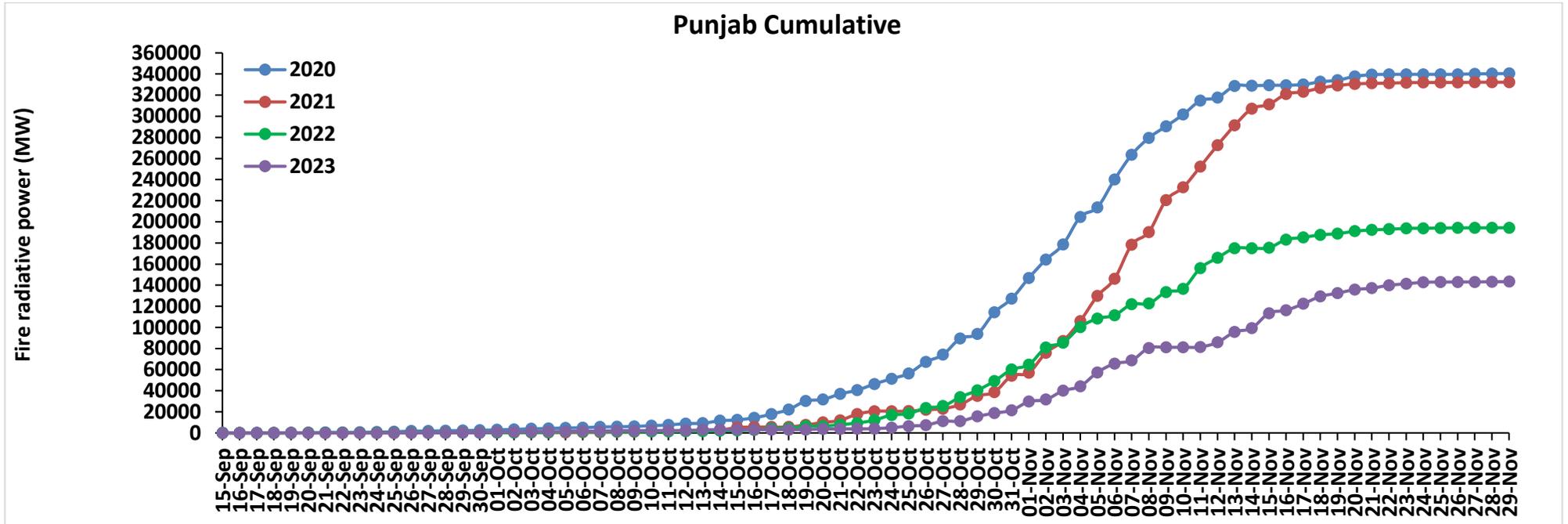
Comparison of residue burning events in current year (2023) with previous years (2020, 2021 and 2022) for the study State



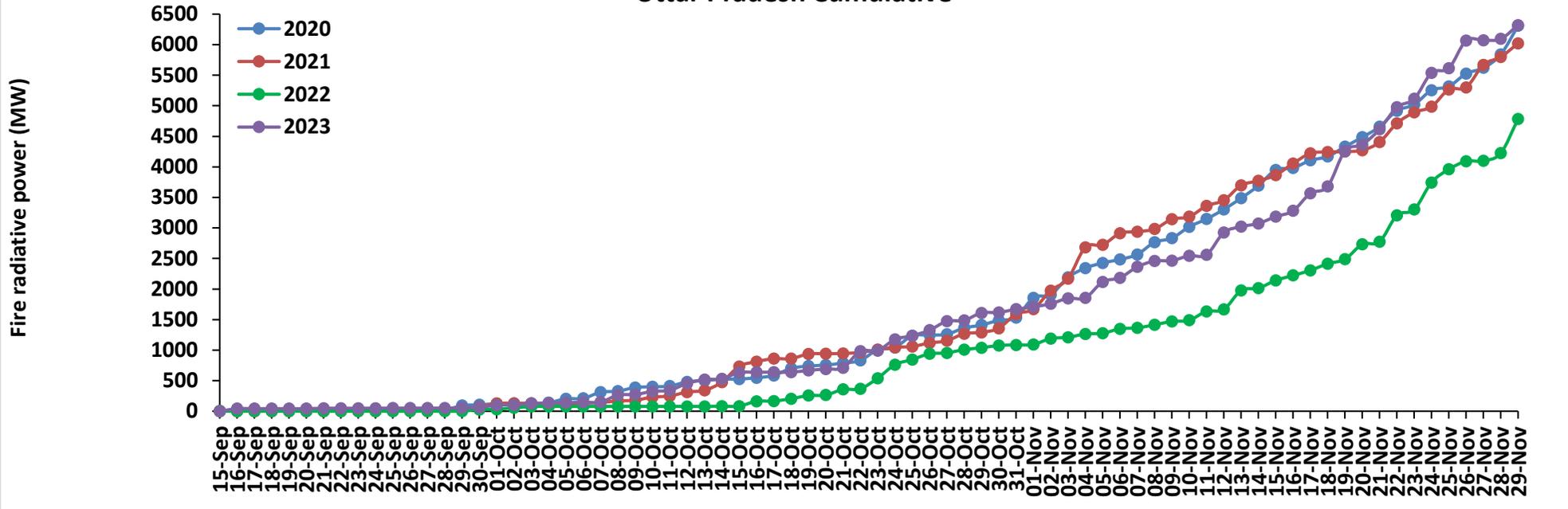




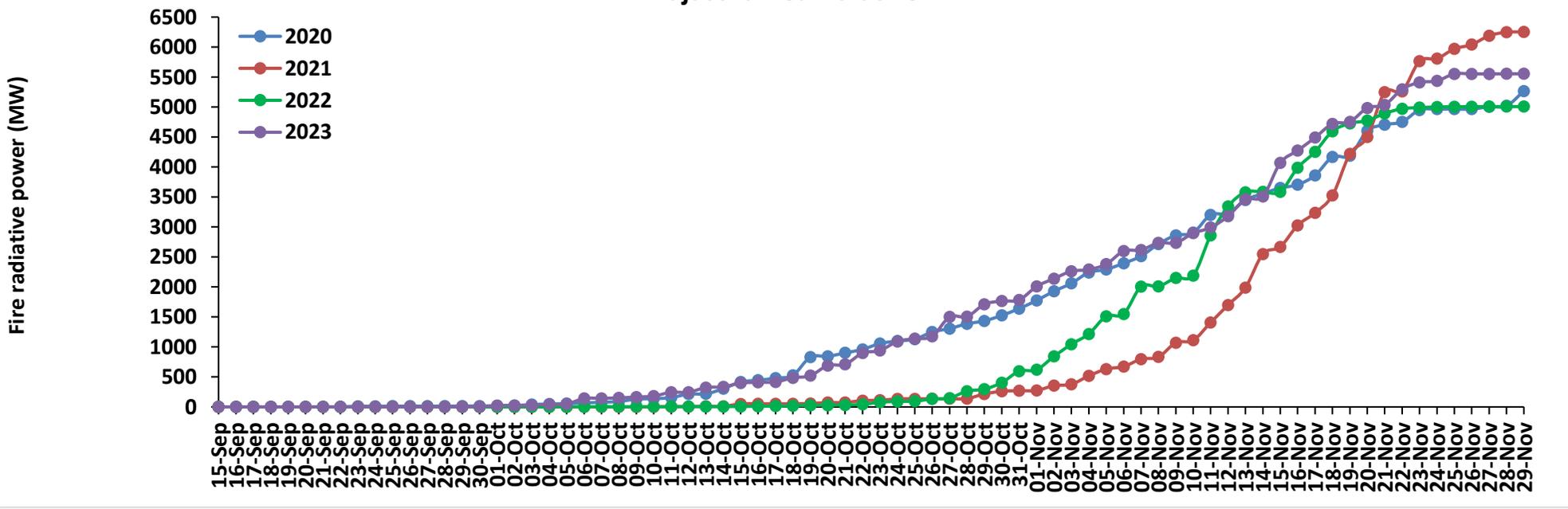
Comparison of residue burning fire power in current year (2023) with previous years (2020, 2021 and 2022) for the study States



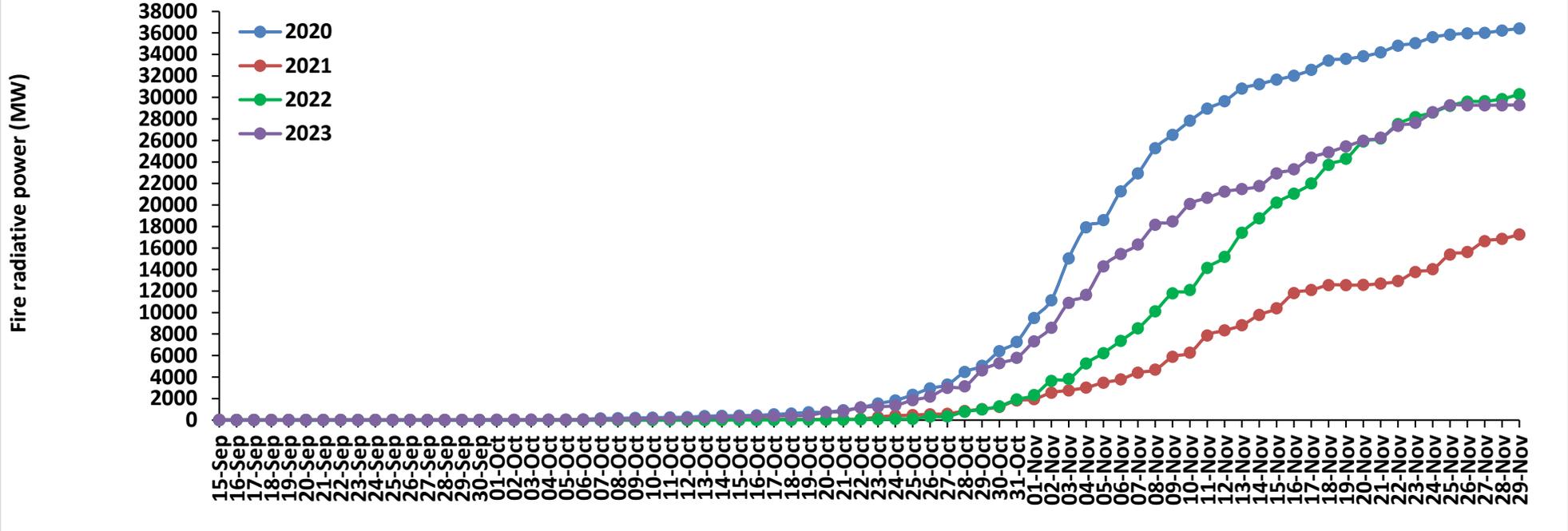
Uttar Pradesh Cumulative



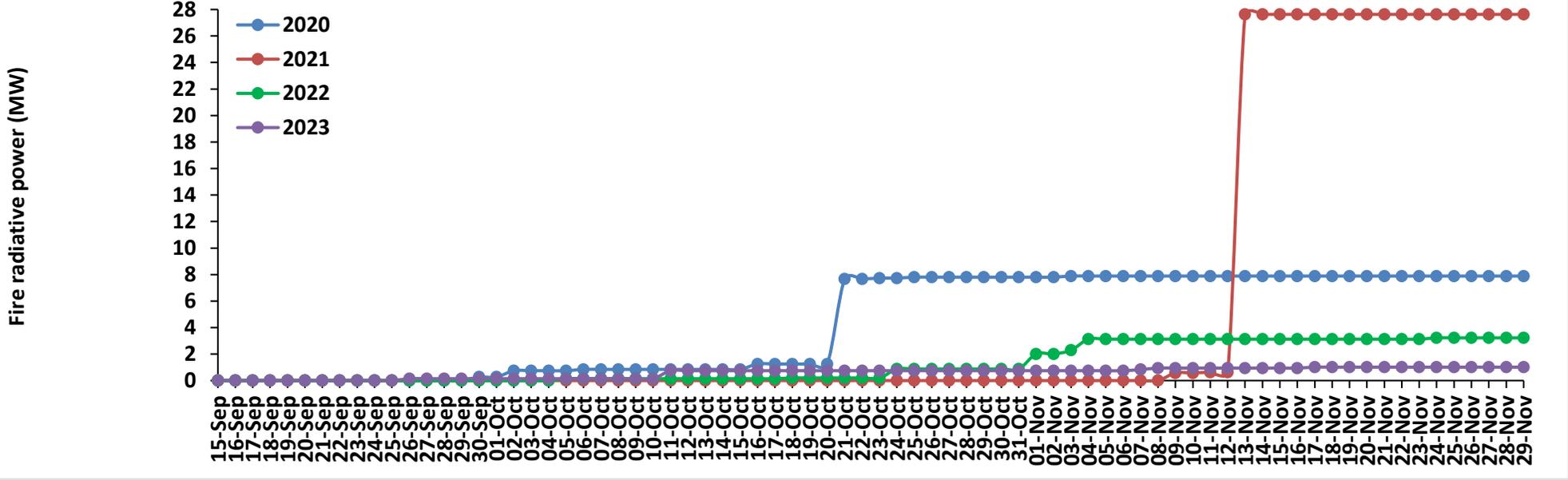
Rajasthan Cumulative



Madhya Pradesh Cumulative

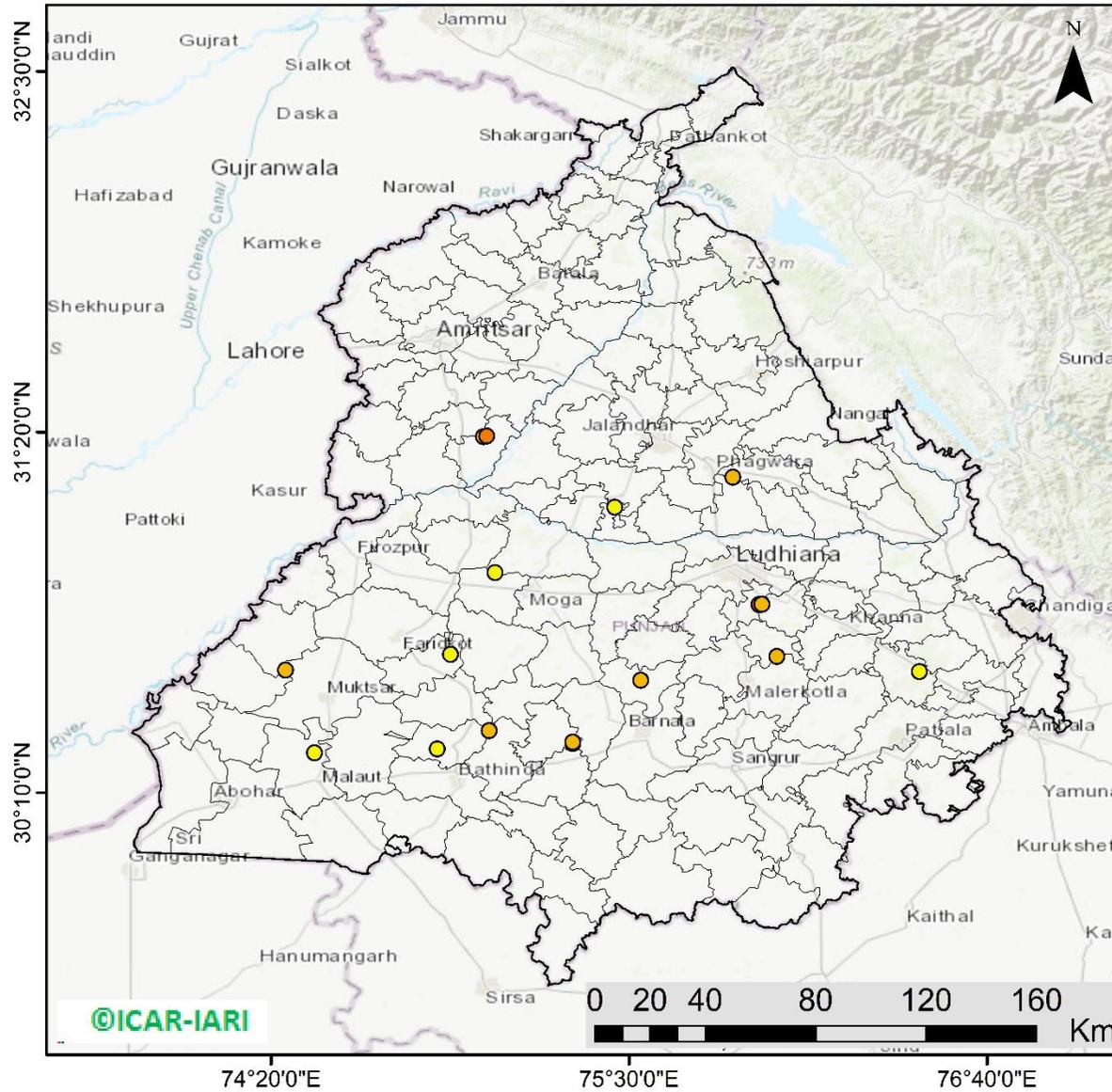


Delhi Cumulative



Punjab

RICE RESIDUE BURNING IN PUNJAB



18 burning events detected in Punjab during (29th Nov 2023)

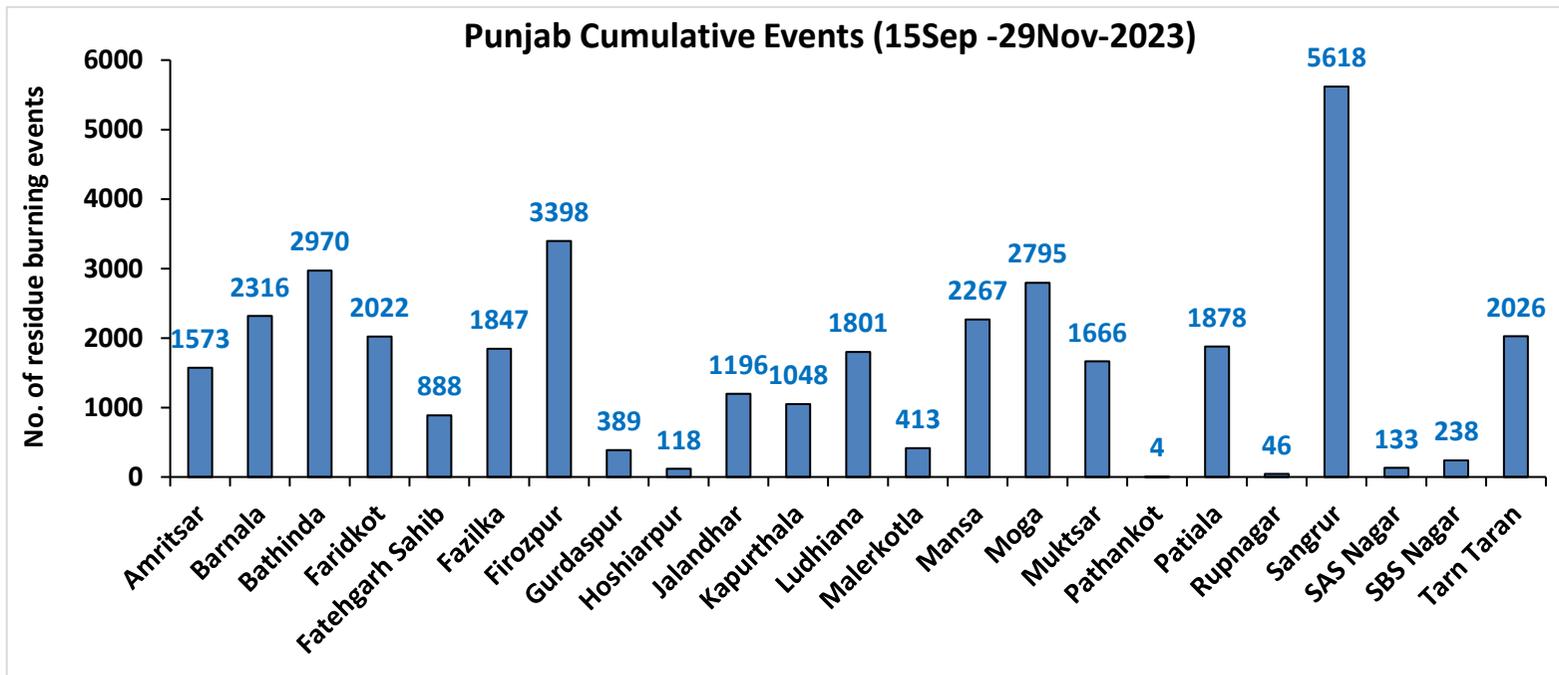
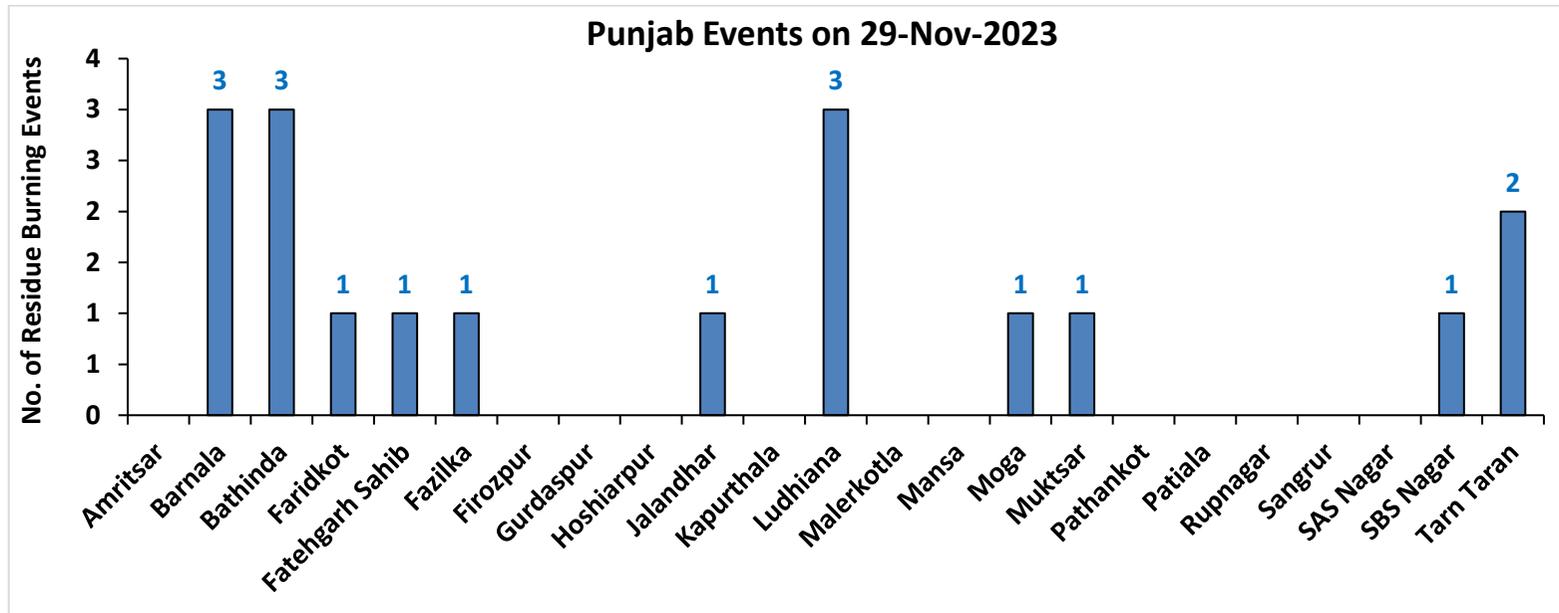
Fire Intensity (W/m2)

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



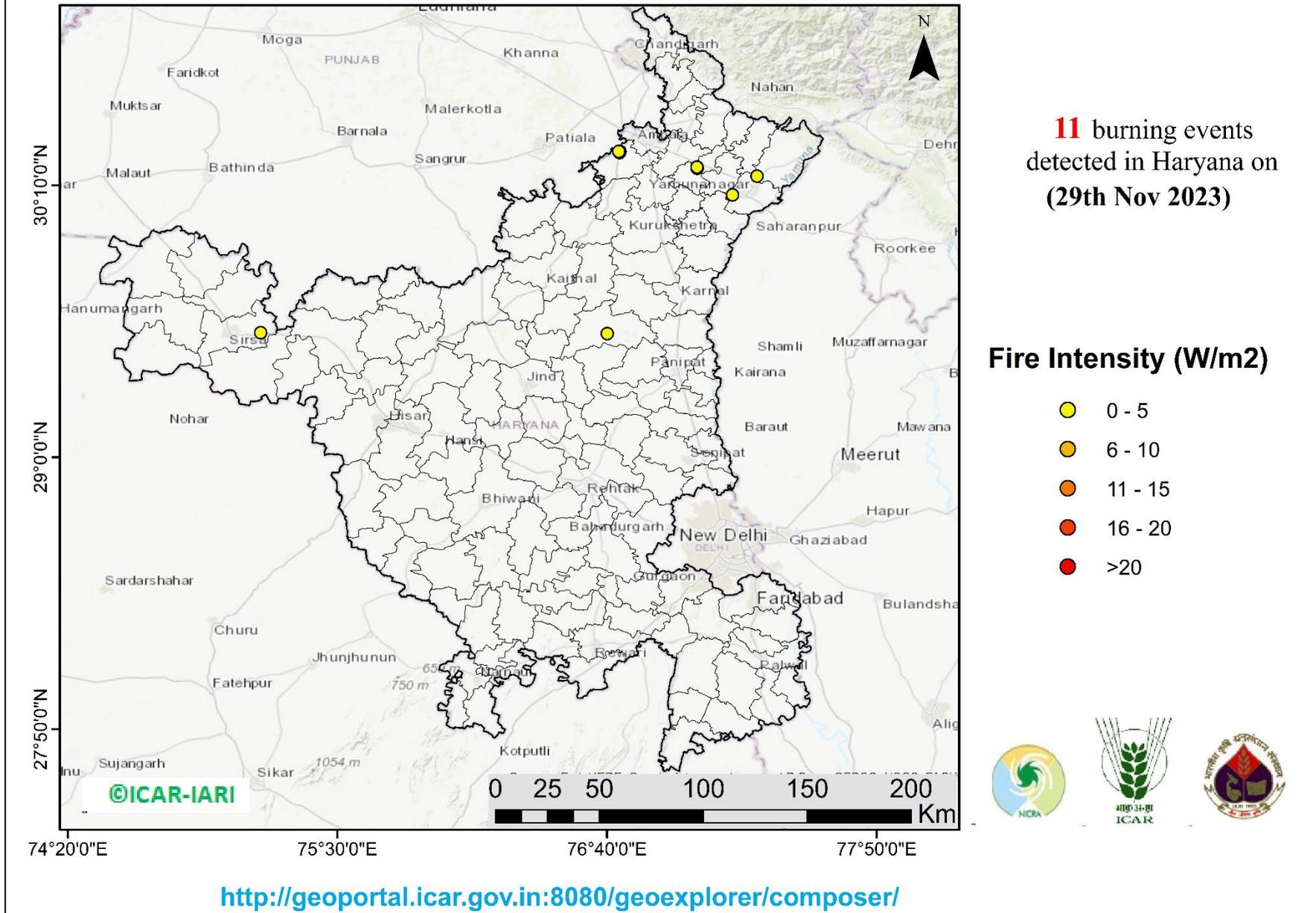
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District-wise cumulative number of residues burning events in Punjab (15Sep- 29Nov-2023)

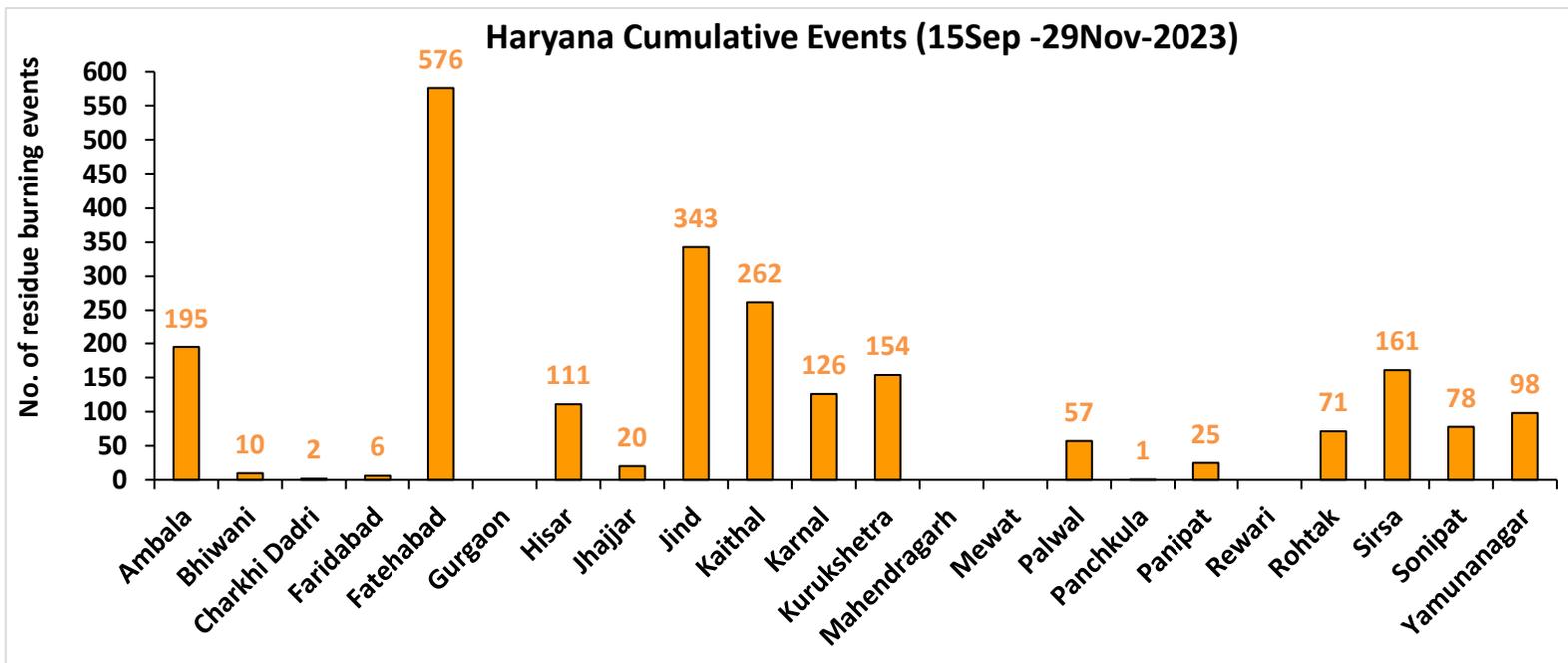
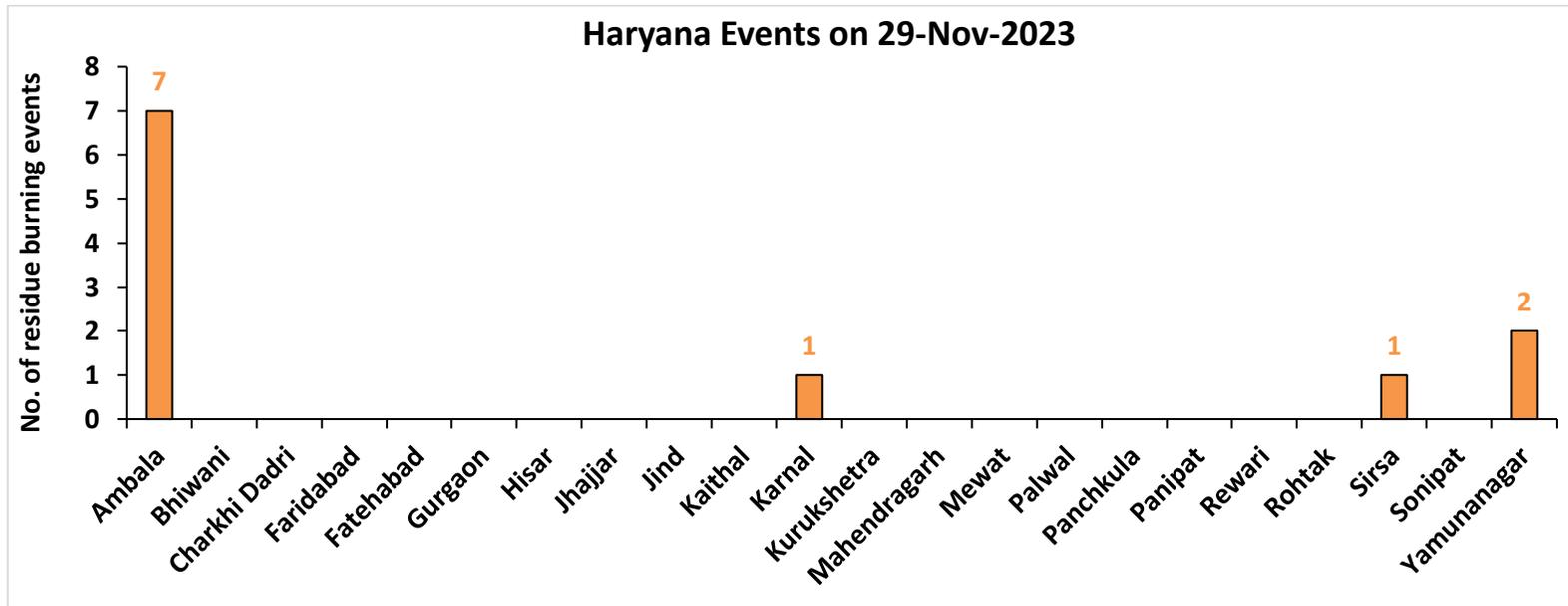


Haryana

RICE RESIDUE BURNING IN HARYANA

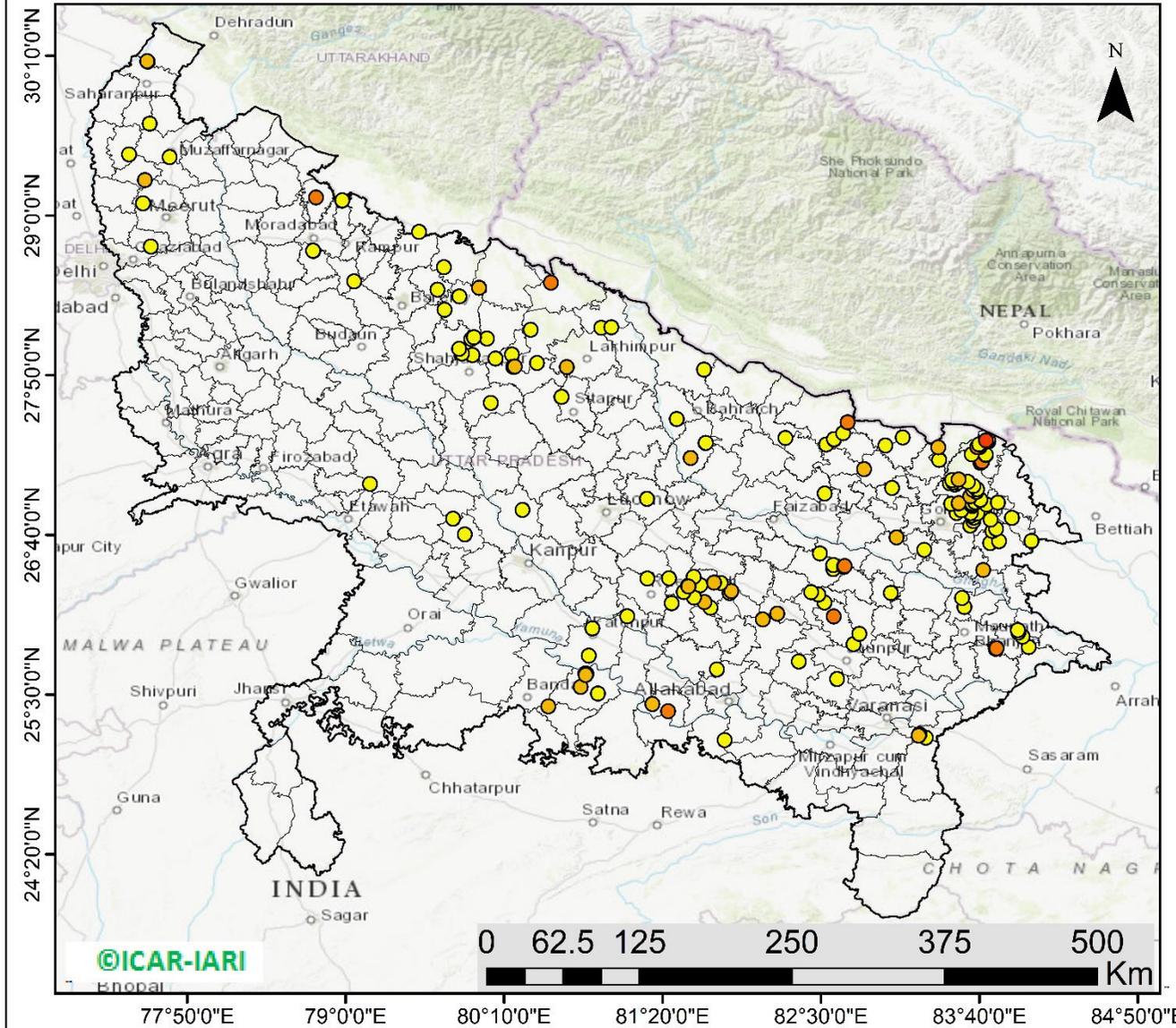


District-wise cumulative number of residues burning events in Haryana (15Sep- 29Nov-2023)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



173 burning events detected in Uttar Pradesh on (29th Nov 2023)

Fire Intensity (W/m2)

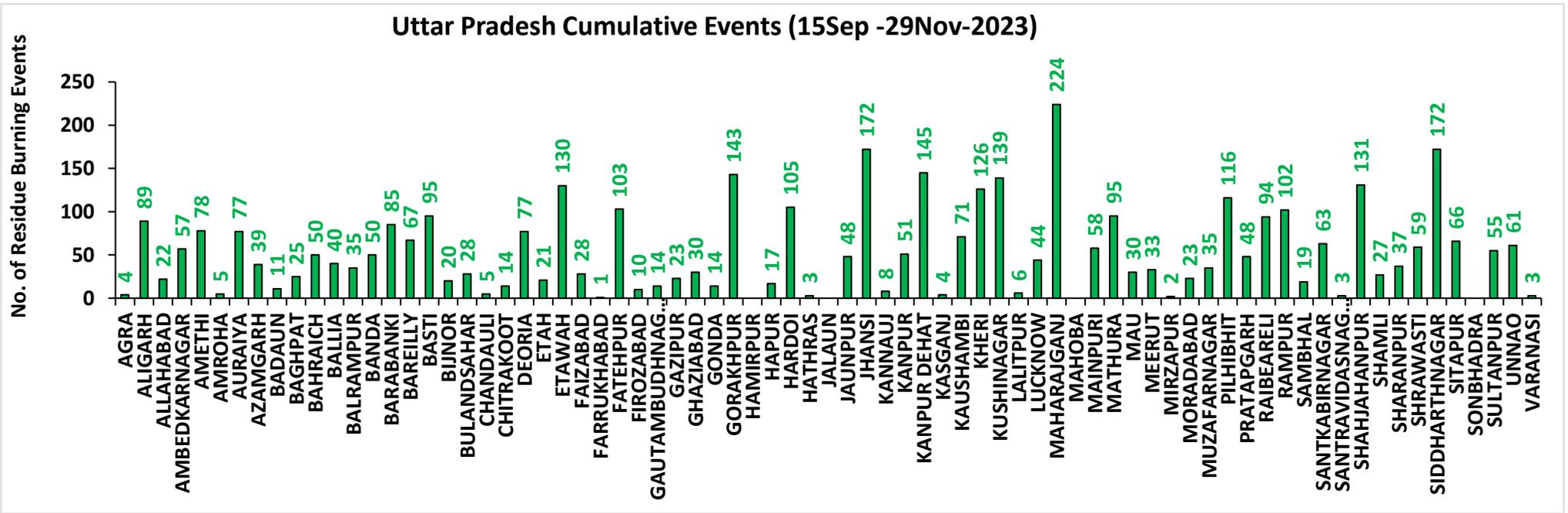
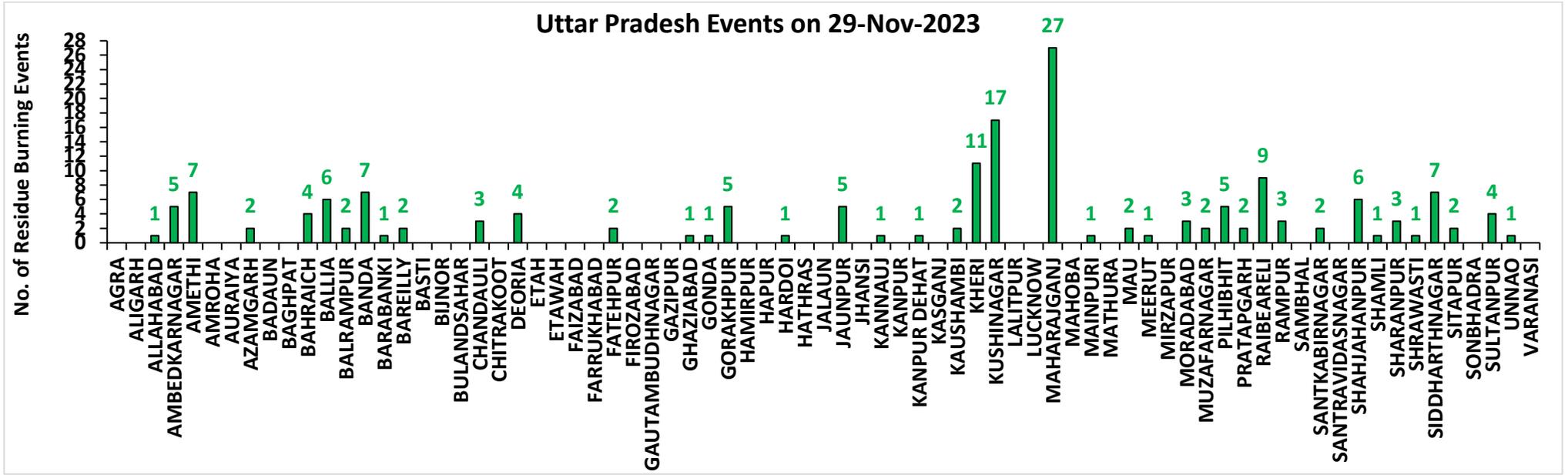
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20

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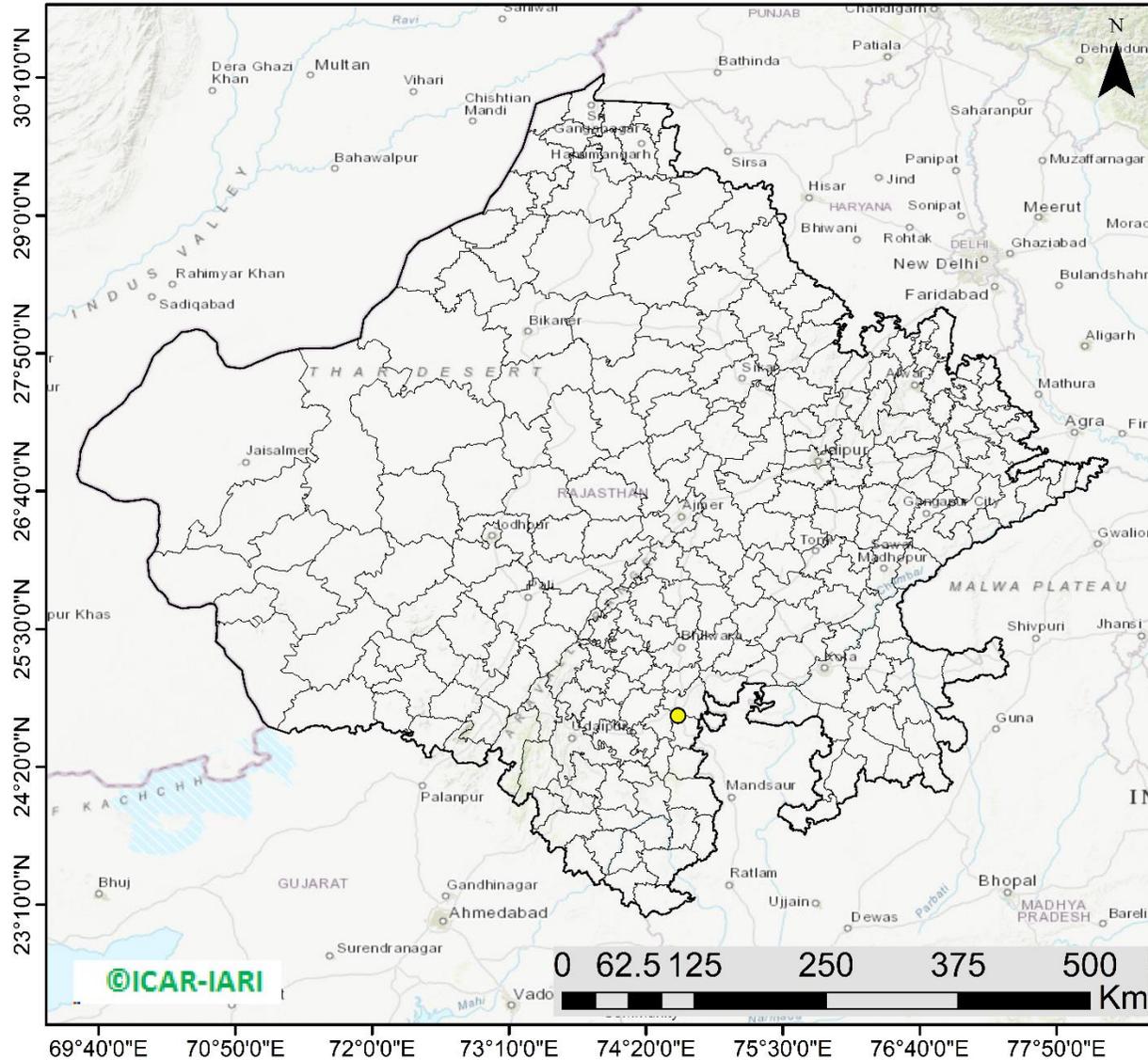
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep-29Nov -2023)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



01 burning events detected in Rajasthan on (29th Nov 2023)

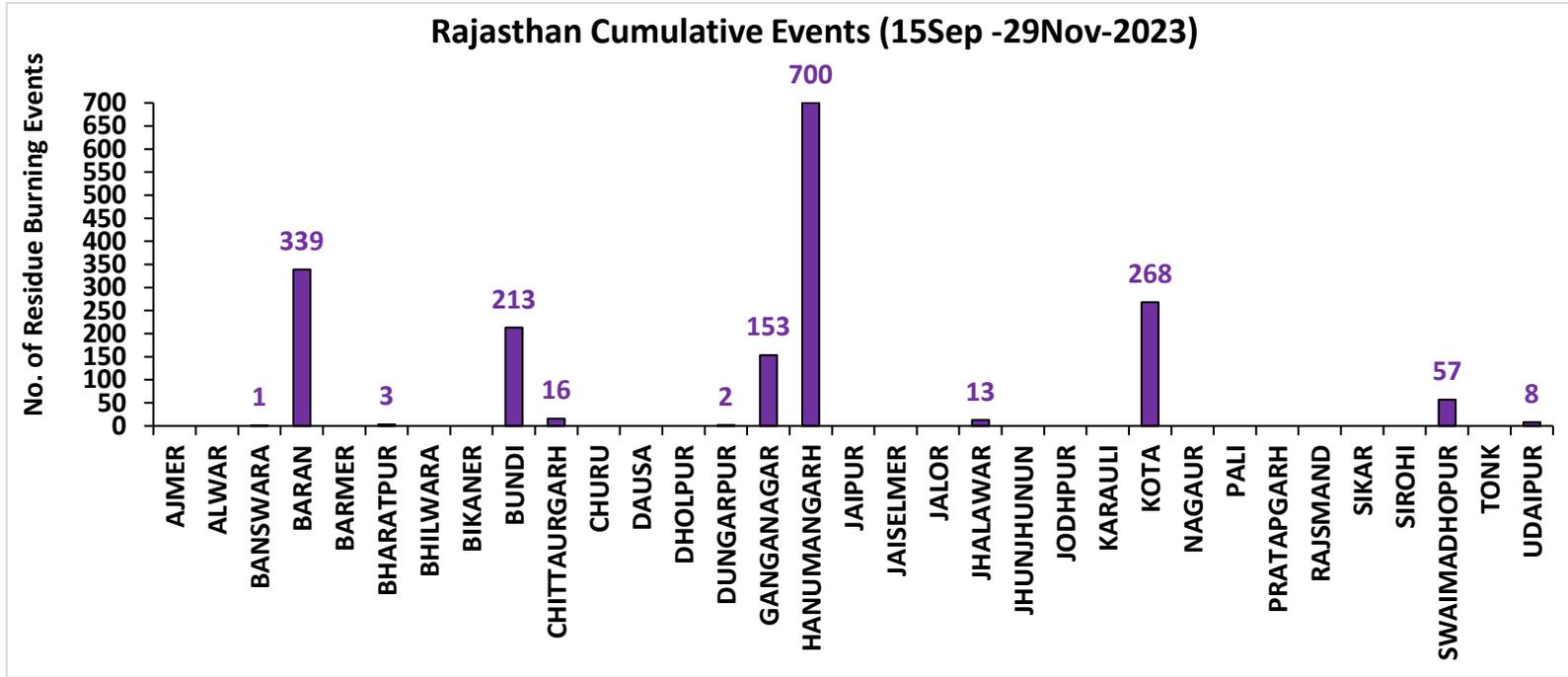
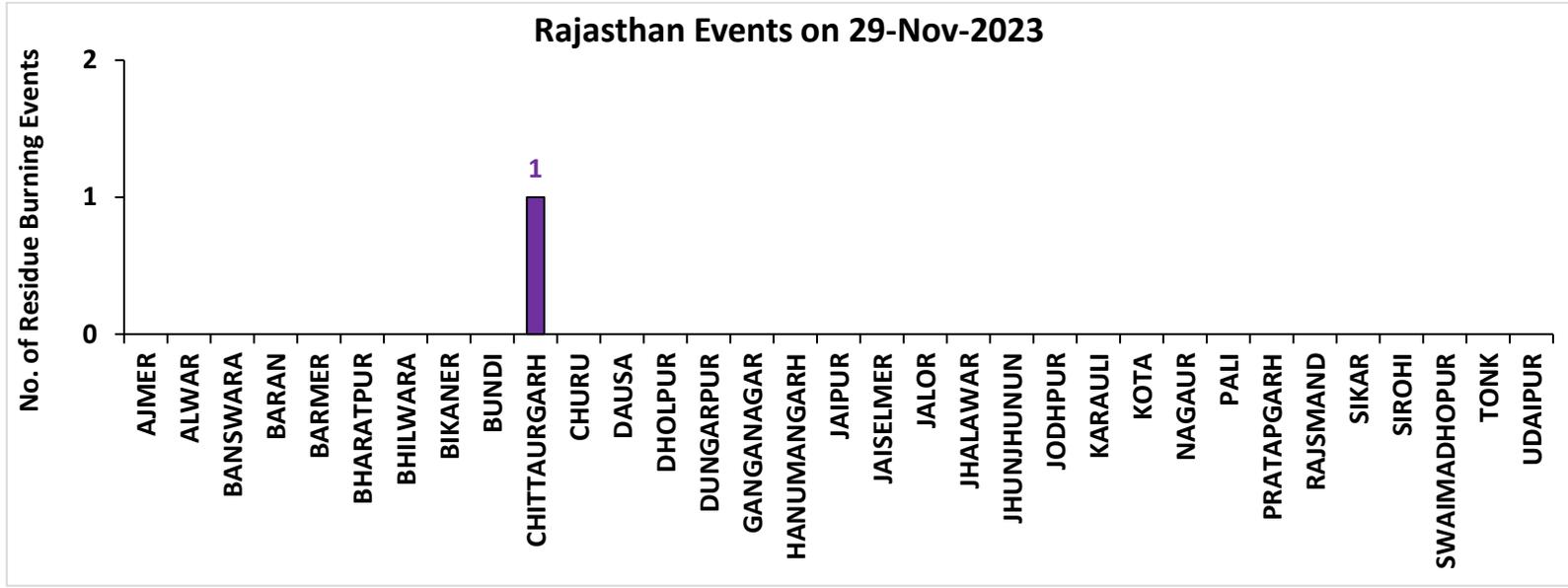
Fire Intensity (W/m2)

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



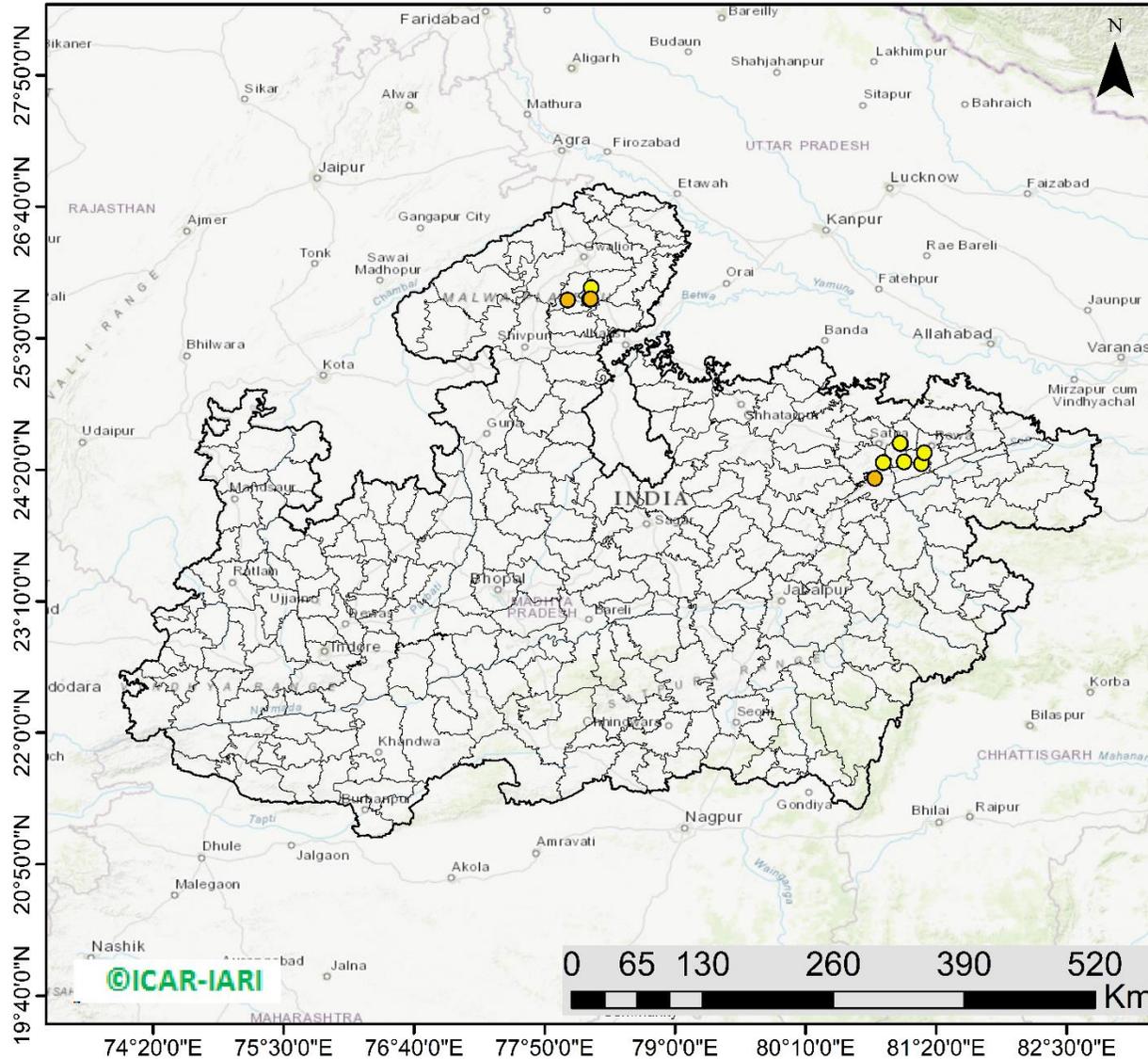
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15Sep-29Nov -2023)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



11 burning events detected in MP on (29th Nov 2023)

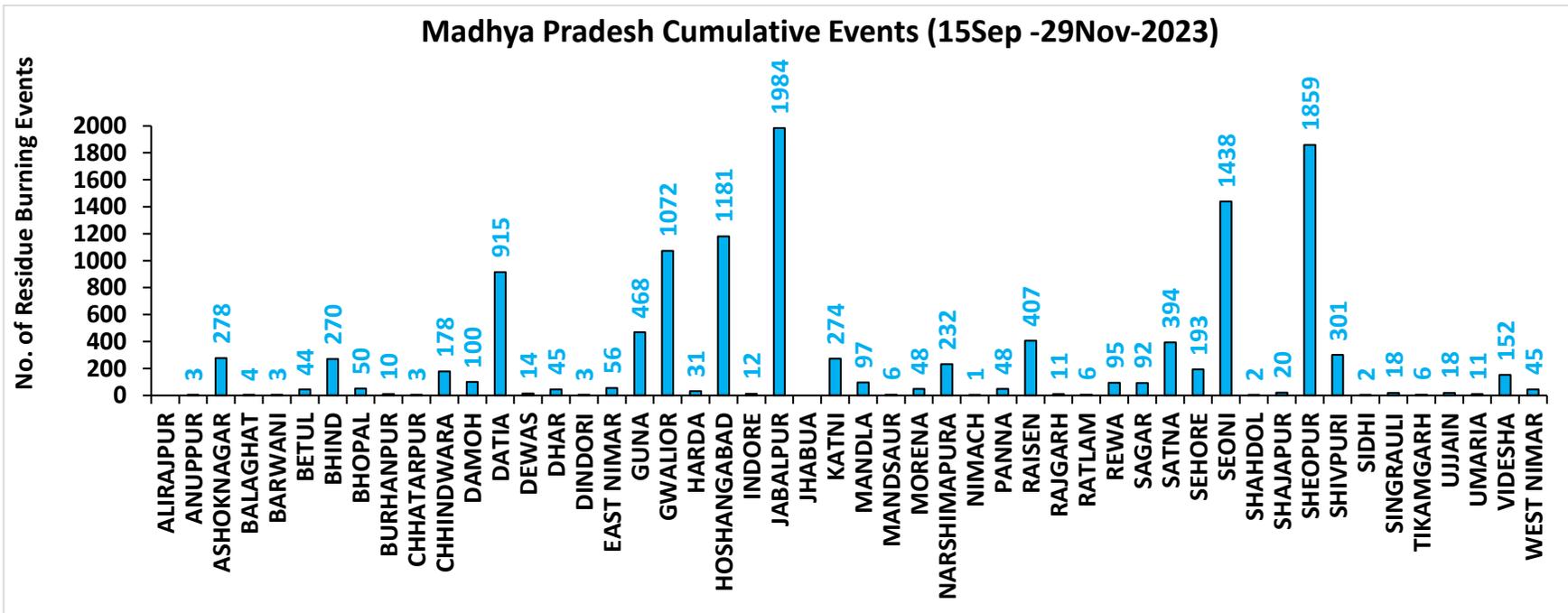
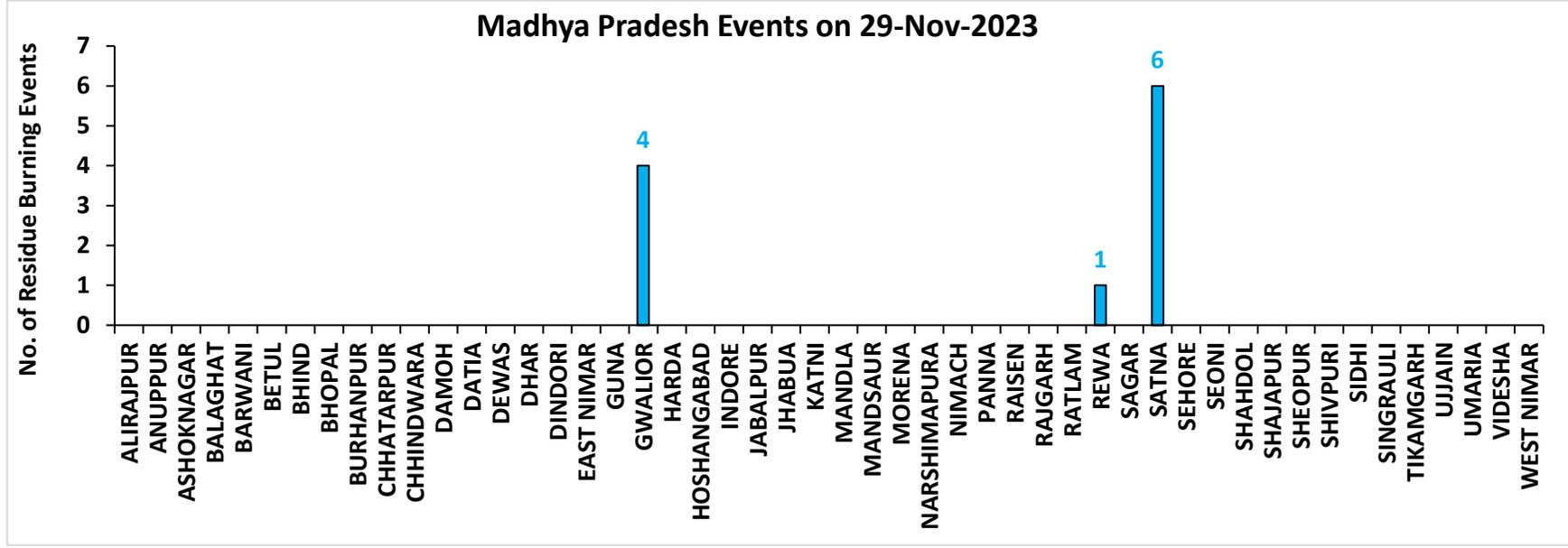
Fire Intensity (W/m²)

- 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-29Nov -2023)



District-wise cumulative number of residues burning events detected in 2020, 2021, 2022 and 2023
(Period: 15 September-29 November)

(a) Punjab

District	15 Sep-29 Nov			
	2020	2021	2022	2023
Amritsar	3066	2174	1542	1573
Barnala	5342	4326	2910	2316
Bathinda	5238	4481	4592	2970
Faridkot	4734	3953	2693	2022
Fatehgarh Sahib	1536	1723	1149	888
Fazilka	2612	2389	2593	1847
Firozpur	8525	6289	4558	3398
Gurdaspur	2130	1395	847	389
Hoshiarpur	387	331	258	118
Jalandhar	1949	2548	1387	1196
Kapurthala	1885	1797	1279	1048
Ludhiana	5062	5815	2681	1801
Malerkotla*	--	--	--	413
Mansa	3786	3217	2815	2267
Moga	7418	6515	3609	2795
Muktsar	5071	4598	3879	1666
Pathankot	13	6	1	4
Patiala	6433	5426	3395	1878
Rupnagar	205	307	246	46
Sangrur#	11726	9389	5916	5618
SAS NAGAR	127	148	103	133
SBS Nagar	131	355	270	238
Tarn Taran	5605	4117	3184	2026
Total	82981	71299	49907	36650

(b) Haryana

District	15 Sep-29 Nov			
	2020	2021	2022	2023
AMBALA	346	307	224	195
BHIWANI	5	12	9	10
CHARKHI DADRI	0	0	1	2
FARIDABAD	1	3	1	6
FATEHABAD	878	1477	766	576
GURGAON	0	0	0	0
HISAR	56	241	115	111
JHAJJAR	6	7	8	20
JIND	346	915	531	343
KAITHAL	840	1155	641	262
KARNAL	591	955	300	126
KURUKSHETRA	406	538	301	154
MAHENDRAGARH	0	0	0	0
MEWAT	0	0	0	0
PALWAL	46	115	51	57
PANCHKULA	0	0	0	1
PANIPAT	53	252	83	25
REWARI	0	0	0	0
ROHTAK	50	78	66	71
SIRSA	347	549	305	161
SONIPAT	71	218	91	78
YAMUNANAGAR	143	147	154	98
Total	4185	6969	3647	2296

*Malerkotla events are included in Sangrur events in 2020, 2021, 2022.

Sangrur events in 2023 do not include Malerkotla events.

(c) Uttar Pradesh

District	15 Sep-29 Nov													
	2020	2021	2022	2023	GAUTAMBUDHNAGAR	16	19	11	14	MUZAFARNAGAR	60	40	27	35
AGRA	7	0	0	4	GAZIPUR	31	30	30	23	PILHIBHIT	31	223	150	116
ALIGARH	113	40	44	89	GHAZIABAD	28	17	11	30	PRATAPGARH	44	43	32	48
ALLAHABAD	44	46	18	22	GONDA	12	13	1	14	RAIBARELI	46	104	54	94
AMBEDKARNAGAR	46	40	46	57	GORAKHPUR	46	38	44	143	RAMPUR	165	193	106	102
AMETHI	11	33	23	78	HAMIRPUR	6	0	0	0	SAMBHAL	21	21	14	19
AMROHA	21	10	8	5	HAPUR	42	21	14	17	SANTKABIRNAGAR	32	24	16	63
AURAIYA	103	81	66	77	HARDOI	111	119	81	105	SANTRAVIDASNAGAR	4	6	5	3
AZAMGARH	65	43	29	39	HATHRAS	0	0	2	3	SHAHJAHANPUR	154	423	322	131
BADAUN	15	19	9	11	JALAUN	50	0	0	0	SHAMLI	50	48	22	27
BAGHPAT	24	23	15	25	JAUNPUR	52	44	35	48	SHARANPUR	106	88	28	37
BAHRAICH	110	60	23	50	JHANSI	378	173	122	172	SHRAWASTI	48	45	18	59
BALLIA	161	85	57	40	KANNAUJ	33	6	8	8	SIDDHARTHANAGAR	76	140	44	172
BALRAMPUR	69	21	13	35	KANPUR	40	39	30	51	SITAPUR	79	56	39	66
BANDA	47	15	22	50	KANPUR DEHAT	98	53	63	145	SONBHADRA	0	2	0	0
BARABANKI	36	73	59	85	KASGANJ	3	2	3	4	SULTANPUR	14	40	31	55
BAREILLY	91	69	70	67	KAUSHAMBI	101	92	51	71	UNNAO	50	34	38	61
BASTI	58	53	21	95	KHERI	198	184	156	126	VARANASI	2	5	0	3
BIJNOR	53	53	18	20	KUSHINAGAR	87	61	55	139	Total	4425	4216	2837	3985
BULANDSAHAR	69	15	25	28	LALITPUR	3	6	3	6					
CHANDAULI	39	24	11	5	LUCKNOW	35	34	16	44					
CHITRAKOOT	19	9	15	14	MAHARAJGANJ	58	209	183	224					
DEORIA	87	41	44	77	MAHOBA	27	0	0	0					
ETAH	17	10	8	21	MAINPURI	68	52	43	58					
ETAWAH	90	108	67	130	MATHURA	161	240	30	95					
FAIZABAD	16	13	8	28	MAU	42	23	13	30					
FARRUKHABAD	7	4	1	1	MEERUT	95	60	37	33					
FATEHPUR	132	108	102	103	MIRZAPUR	12	18	7	2					
FIROZABAD	27	17	10	10	MORADABAD	33	15	10	23					

(d) Delhi

District	15 Sep-29 Nov			
	2020	2021	2022	2023
CENTRAL	0	0	0	0
EAST	0	0	0	0
NEW DELHI	0	0	0	0
NORTH	3	3	9	5
NORTH EAST	0	0	0	0
NORTH WEST DELHI	3	1	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	2	0	1	0
Total	9	4	10	5

(e) Rajasthan

District	15 Sep-29 Nov			
	2020	2021	2022	2023
AJMER	3	0	0	0
ALWAR	10	0	0	0
BANSWARA	0	0	1	1
BARAN	167	13	77	339
BARMER	4	0	0	0
BHARATPUR	2	3	1	3
BHILWARA	11	0	0	0
BIKANER	1	0	0	0
BUNDI	128	87	180	213
CHITTAURGARH	5	13	8	16
CHURU	0	0	0	0
DAUSA	1	0	0	0
DHOLPUR	0	0	0	0
DUNGARPUR	0	0	2	2
GANGANAGAR	225	142	104	153
HANUMANGARH	948	990	677	700
JAIPUR	4	0	0	0
JAISELMER	5	0	0	0
JALOR	2	0	0	0
JHALAWAR	10	1	12	13
JHUNJHUNUN	1	0	0	0
JODHPUR	5	0	0	0
KARAULI	1	0	0	0
KOTA	116	57	147	268
NAGAU	4	0	0	0
PALI	12	0	0	0
PRATAPGARH	8	0	0	0
RAJSMAND	1	0	0	0
SIKAR	1	0	0	0
SIROHI	3	0	0	0
SWAIMADHOPUR	65	34	55	57
TONK	5	0	0	0
UDAIPUR	2	1	3	8
Total	1750	1341	1267	1773

(f) Madhya Pradesh

District	15 Sep-29 Nov								
	2020	2021	2022	2023	PANNA	50	23	39	48
ALIRAJPUR	0	0	0	0	RAISEN	615	361	460	407
ANUPPUR	3	2	6	3	RAJGARH	12	3	5	11
ASHOKNAGAR	156	90	188	278	RATLAM	10	7	3	6
BALAGHAT	9	6	4	4	REWA	138	120	97	95
BARWANI	6	0	0	3	SAGAR	28	31	55	92
BETUL	37	16	27	44	SATNA	576	526	483	394
BHIND	268	159	209	270	SEHORE	164	153	223	193
BHOPAL	52	40	43	50	SEONI	1233	894	1127	1438
BURHANPUR	16	3	5	10	SHAHDOL	3	1	3	2
CHHATARPUR	9	0	2	3	SHAJAPUR	22	0	0	20
CHHINDWARA	136	59	102	178	SHEOPUR	1861	1011	1800	1859
DAMOH	75	53	70	100	SHIVPURI	393	112	286	301
DATIA	1188	498	860	915	SIDHI	4	6	2	2
DEWAS	8	0	0	14	SINGRAULI	0	7	3	18
DHAR	47	0	0	45	TIKAMGARH	4	0	1	6
DINDORI	0	0	1	3	UJJAIN	18	0	0	18
EAST NIMAR	23	7	11	56	UMARIA	9	11	15	11
GUNA	70	12	124	468	VIDESHA	145	123	94	152
GWALIOR	2057	848	1581	1072	WEST NIMAR	68	12	20	45
HARDA	14	21	11	31	Total	14107	8146	11586	12500
HOSHANGABAD	1060	1067	1099	1181					
INDORE	4	0	0	12					
JABALPUR	2656	1419	1898	1984					
JHABUA	0	0	0	0					
KATNI	326	119	212	274					
MANDLA	152	118	146	97					
MANDSAUR	14	0	0	6					
MORENA	62	37	25	48					
NARSHIMAPURA	304	171	246	232					
NIMACH	2	0	0	1					

State-wise and date-wise number of paddy residue burning events detected in 2020, 2021, 2022 and 2023
(Period: 15 September-29 November)

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
24-Oct	911	0	1019	360	57	38	250	70	63	11	212	38
25-Oct	1416	76	181	398	155	71	12	58	50	18	9	30
26-Oct	2126	329	1238	589	77	175	123	67	33	41	23	78
27-Oct	2563	279	1111	766	96	93	83	67	40	58	23	97
28-Oct	3232	906	2067	127	139	149	123	14	87	35	34	36
29-Oct	1624	1353	1898	1068	52	161	112	75	139	32	73	48
30-Oct	3946	1373	1761	1030	100	148	112	52	50	53	43	19
31-Oct	3531	2895	2131	1389	108	353	70	51	49	170	20	28
01-Nov	3835	1796	1842	1921	151	124	88	99	74	157	9	95
02-Nov	4098	3001	3634	1668	111	203	166	48	82	87	25	37
03-Nov	2818	2512	2666	1551	93	197	128	28	197	66	40	36
04-Nov	4584	3032	2437	1360	72	228	63	33	152	123	61	17
05-Nov	4529	5327	2817	3230	66	331	90	109	52	70	24	64
06-Nov	5382	3942	599	2060	151	219	46	65	43	208	28	87
07-Nov	5491	5199	2487	1515	150	182	37	26	86	46	8	169
08-Nov	3674	4397	604	2003	115	138	11	44	169	21	44	47
09-Nov	1718	5079	1778	639	21	217	69	27	115	51	58	17
10-Nov	3127	4008	1893	6	80	184	35	0	101	77	33	30
11-Nov	2822	4156	3916	104	93	126	152	27	71	151	36	35
12-Nov	1989	3403	2467	987	83	127	99	110	108	120	36	238
13-Nov	2441	3742	2175	1624	105	210	132	44	172	95	102	176

14-Nov	307	2541	4	1776	35	195	17	21	258	49	101	26
15-Nov	32	1761	141	2544	31	129	21	62	29	67	84	49
16-Nov	8	1757	1358	1271	0	269	84	46	15	138	48	56
17-Nov	248	523	966	1150	9	101	39	45	38	177	50	168
18-Nov	670	680	701	637	60	111	108	21	62	14	66	180
19-Nov	454	448	426	740	37	132	79	33	129	11	116	188
20-Nov	677	283	368	634	77	127	32	38	134	20	168	102
21-Nov	457	168	243	513	65	178	11	54	135	106	46	110
22-Nov	46	66	78	512	15	91	20	62	120	276	76	217
23-Nov	43	91	140	205	52	59	27	23	106	186	73	307
24-Nov	9	34	66	191	20	37	32	16	167	87	195	178
25-Nov	0	31	44	37	1	41	28	4	127	80	241	74
26-Nov	16	21	22	63	0	48	12	2	83	74	127	100
27-Nov	124	19	12	0	26	28	8	1	54	257	14	11
28-Nov	84	5	11	18	57	9	13	0	118	241	59	64
29-Nov	55	8	8	18	65	14	5	11	247	101	101	173
Total	82981	71299	49907	36650	4185	6969	3647	2296	4425	4216	2837	3985

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
24-Oct	0	0	2	0	20	4	7	38	150	34	26	132
25-Oct	1	0	0	0	18	2	4	47	144	60	0	159
26-Oct	0	0	0	0	34	3	21	59	178	55	57	320
27-Oct	0	0	0	0	42	1	21	73	294	62	38	256
28-Oct	0	0	0	0	45	4	46	12	537	110	143	202
29-Oct	0	0	0	0	29	23	37	73	349	97	151	372
30-Oct	0	0	0	0	17	20	55	37	428	168	119	224
31-Oct	0	0	0	0	37	15	36	33	455	299	112	360

01-Nov	0	0	1	0	51	5	27	60	709	198	142	509
02-Nov	0	0	0	0	55	19	63	40	820	214	284	401
03-Nov	1	0	1	0	34	20	54	38	771	148	323	552
04-Nov	0	0	2	0	46	19	34	21	618	123	348	408
05-Nov	0	0	0	0	46	45	91	59	474	320	319	698
06-Nov	0	0	0	0	40	32	27	47	678	248	392	655
07-Nov	0	0	0	1	57	38	80	23	848	199	383	497
08-Nov	0	0	0	1	33	44	5	29	981	170	783	417
09-Nov	0	1	0	0	34	48	22	3	495	330	570	251
10-Nov	0	0	0	0	48	40	34	27	346	380	282	508
11-Nov	0	1	0	0	75	55	95	29	418	506	482	488
12-Nov	0	0	0	0	31	40	84	33	422	185	421	300
13-Nov	0	2	0	0	54	78	63	60	670	171	773	144
14-Nov	0	0	0	0	16	88	1	53	294	346	633	164
15-Nov	0	0	0	0	6	51	2	84	35	353	507	326
16-Nov	0	0	0	0	16	81	78	27	145	660	316	423
17-Nov	0	0	0	1	60	38	48	45	191	261	416	465
18-Nov	0	0	0	0	75	77	55	25	352	126	524	363
19-Nov	0	0	0	0	27	73	19	37	124	16	625	187
20-Nov	0	0	0	0	59	53	15	40	106	6	556	208
21-Nov	0	0	0	0	57	72	12	51	159	95	196	267
22-Nov	0	0	0	0	9	21	4	52	165	188	170	510
23-Nov	0	0	0	0	66	61	10	24	150	262	259	263
24-Nov	0	0	1	0	13	26	14	2	258	224	299	253
25-Nov	0	0	0	0	2	30	7	16	106	343	315	228
26-Nov	0	0	0	0	0	11	2	0	48	318	198	4
27-Nov	0	0	0	0	16	33	2	0	39	416	57	0
28-Nov	0	0	0	0	24	12	1	3	38	163	109	5
29-Nov	0	0	0	0	44	7	0	1	83	95	74	11
Total	9	4	10	5	1750	1341	1267	1773	14107	8146	11586	12500

Details of residue burning events in Punjab on 29-Nov-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	Barnala	Mahal Kalan	AQUA	30.53000	75.53800	13:55:58	D	5.90
2	Barnala	Sehna	S-NPP	30.32925	75.31668	12:52:12	D	3.40
3	Barnala	Sehna	S-NPP	30.33010	75.31633	14:31:46	D	5.20
4	Bathinda	Goniana Mandi	S-NPP	30.30769	74.87481	12:52:12	D	1.40
5	Bathinda	Goniana Mandi	AQUA	30.36700	75.04400	13:55:58	D	8.30
6	Bathinda	Phul	S-NPP	30.32566	75.31644	14:31:46	D	5.90
7	Faridkot	Kot Kapura	S-NPP	30.61372	74.91762	12:52:12	D	3.10
8	Fatehgarh Sahib	Sirhind	AQUA	30.55800	76.44600	13:55:58	D	4.40
9	Fazilka	Guruhar Sahai	AQUA	30.56300	74.38000	13:55:58	D	8.30
10	Jalandhar	Mehatpur	AQUA	31.09000	75.45300	13:55:58	D	4.90
11	Ludhiana	Dehlon	AQUA	30.77500	75.92300	13:55:58	D	18.20
12	Ludhiana	Dehlon	AQUA	30.77600	75.93300	13:55:58	D	5.90
13	Ludhiana	Maloud	S-NPP	30.60717	75.98164	12:52:12	D	5.30
14	Moga	Moga 2	S-NPP	30.87815	75.06287	12:52:12	D	2.20
15	Muktsar	Malout	S-NPP	30.29509	74.47470	12:52:12	D	3.20
16	SBS Nagar	Banga	AQUA	31.18700	75.83800	13:55:58	D	5.60
17	Tarn Taran	Chohla Sahib	AQUA	31.32000	75.03600	13:55:58	D	10.90
18	Tarn Taran	Naushera Pannuan	AQUA	31.31800	75.02500	13:55:58	D	6.40

Details of residue burning events in Haryana on 29-Nov-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	AMBALA	AMBALA-II	S-NPP	30.30636	76.72141	01:41:29	N	1.90
2	AMBALA	AMBALA-II	S-NPP	30.30862	76.72150	12:52:12	D	2.40
3	AMBALA	AMBALA-II	S-NPP	30.31058	76.72323	01:41:29	N	2.20
4	AMBALA	AMBALA-II	S-NPP	30.31094	76.72201	01:41:29	N	1.90
5	AMBALA	AMBALA-II	S-NPP	30.31108	76.71784	01:41:29	N	2.20
6	AMBALA	BARARA	S-NPP	30.23940	77.05740	12:52:12	D	3.10
7	AMBALA	BARARA	S-NPP	30.24390	77.05611	12:52:12	D	1.80
8	KARNAL	ASSANDH	AQUA	29.53000	76.66800	13:55:58	D	3.40
9	SIRSA	SIRSA	S-NPP	29.53341	75.16798	01:41:29	N	1.50
10	YAMUNANAGAR	CHHACHHRAULI	S-NPP	30.20522	77.31612	12:52:12	D	2.70
11	YAMUNANAGAR	JAGADHRI	S-NPP	30.12478	77.21026	12:52:12	D	2.50

Details of residue burning events in Uttar Pradesh on 29-Nov-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	ALLAHABAD	BARA	S-NPP	25.16627	81.79140	01:41:29	N	0.40
2	AMBEDKARNAGAR	AKBARPUR	S-NPP	26.41616	82.59184	01:41:29	N	0.40
3	AMBEDKARNAGAR	AKBARPUR	S-NPP	26.44520	82.59144	12:52:12	D	1.80
4	AMBEDKARNAGAR	AKBARPUR	S-NPP	26.52934	82.49310	12:52:12	D	3.60
5	AMBEDKARNAGAR	AKBARPUR	AQUA	26.43200	82.66900	13:55:58	D	10.00
6	AMBEDKARNAGAR	AKBARPUR	AQUA	26.43800	82.67500	13:55:58	D	11.50
7	AMETHI	AMETHI	S-NPP	26.24063	81.82816	12:52:12	D	4.40
8	AMETHI	AMETHI	S-NPP	26.25455	81.84064	12:52:12	D	6.50
9	AMETHI	GAURIGANJ	S-NPP	26.13303	81.68691	12:52:12	D	4.70
10	AMETHI	GAURIGANJ	S-NPP	26.17530	81.64279	12:52:12	D	5.10
11	AMETHI	GAURIGANJ	S-NPP	26.29799	81.61215	12:52:12	D	3.90
12	AMETHI	GAURIGANJ	S-NPP	26.31383	81.76177	12:52:12	D	3.40
13	AMETHI	GAURIGANJ	S-NPP	26.31672	81.71386	12:52:12	D	5.40
14	AZAMGARH	BURHANPUR	S-NPP	26.24150	83.01519	12:52:12	D	2.90
15	AZAMGARH	PHULPUR	S-NPP	25.94249	82.78294	12:52:12	D	2.20
16	BAHRAICH	KAISARGANJ	S-NPP	27.22716	81.54056	12:52:12	D	5.40
17	BAHRAICH	KAISARGANJ	S-NPP	27.33638	81.65092	12:52:12	D	2.90
18	BAHRAICH	KAISARGANJ	S-NPP	27.33752	81.65286	12:52:12	D	3.00
19	BAHRAICH	MAHASI	S-NPP	27.51187	81.43851	12:52:12	D	2.30
20	BALLIA	RASRA	S-NPP	25.84551	84.03060	12:52:12	D	2.50
21	BALLIA	RASRA	S-NPP	25.95224	83.95385	12:52:12	D	3.40
22	BALLIA	RASRA	S-NPP	25.96937	83.95033	12:52:12	D	3.00
23	BALLIA	RASRA	AQUA	25.83400	83.78700	13:55:58	D	9.60
24	BALLIA	RASRA	AQUA	25.83600	83.79400	13:55:58	D	13.60
25	BALLIA	SIKANDARPUR	S-NPP	25.92216	83.98569	12:52:12	D	2.90
26	BALRAMPUR	BALRAMPUR	S-NPP	27.37377	82.23846	12:52:12	D	3.90
27	BALRAMPUR	TULSIPUR	S-NPP	27.48814	82.69695	12:52:12	D	12.00
28	BANDA	ATARRA	AQUA	25.41300	80.49300	13:55:58	D	5.60
29	BANDA	BABERU	S-NPP	25.50686	80.85814	01:41:29	N	0.40
30	BANDA	BABERU	S-NPP	25.64871	80.76617	12:52:12	D	2.60

31	BANDA	BABERU	S-NPP	25.65021	80.77385	12:52:12	D	4.30
32	BANDA	BABERU	S-NPP	25.65270	80.76524	12:52:12	D	3.50
33	BANDA	BABERU	AQUA	25.55500	80.73100	13:55:58	D	5.90
34	BANDA	BABERU	AQUA	25.64200	80.76800	13:55:58	D	6.70
35	BARABANKI	NAWABGANJ	S-NPP	26.92828	81.21916	01:41:29	N	0.90
36	BAREILLY	BAHERI	S-NPP	28.87916	79.54119	12:52:12	D	3.10
37	BAREILLY	NAWABGANJ	AQUA	28.45700	79.67700	13:55:58	D	3.90
38	CHANDAULI	CHANDAULI	S-NPP	25.18360	83.27206	12:52:12	D	3.20
39	CHANDAULI	CHANDAULI	S-NPP	25.20862	83.22548	12:52:12	D	10.80
40	CHANDAULI	CHANDAULI	AQUA	25.19900	83.22000	13:55:58	D	9.50
41	DEORIA	DEORIA	S-NPP	26.60502	83.74641	12:52:12	D	4.00
42	DEORIA	DEORIA	S-NPP	26.61954	83.81226	12:52:12	D	3.10
43	DEORIA	DEORIA	S-NPP	26.69490	83.76278	12:52:12	D	2.50
44	DEORIA	RUDRAPUR	S-NPP	26.40932	83.69561	12:52:12	D	6.40
45	FATEHPUR	FATEHPUR	S-NPP	25.78371	80.79072	12:52:12	D	3.90
46	FATEHPUR	FATEHPUR	S-NPP	25.98237	80.81741	12:52:12	D	3.30
47	GHAZIABAD	MODINAGAR	S-NPP	28.77226	77.56626	01:41:29	N	0.50
48	GONDA	MANKAPUR	S-NPP	26.96762	82.52809	12:52:12	D	2.70
49	GORAKHPUR	CHAURI CHAURA	S-NPP	26.73369	83.59952	12:52:12	D	2.50
50	GORAKHPUR	GORAKHPUR	S-NPP	26.82500	83.49863	12:52:12	D	2.70
51	GORAKHPUR	GORAKHPUR	S-NPP	26.84526	83.53374	12:52:12	D	1.70
52	GORAKHPUR	GORAKHPUR	S-NPP	26.89147	83.45917	12:52:12	D	3.90
53	GORAKHPUR	KHAJNI	S-NPP	26.55569	83.26088	12:52:12	D	2.50
54	HARDOI	SHAHABAD	S-NPP	27.62944	80.06944	12:52:12	D	0.80
55	JAUNPUR	MACHHALI SAHAR	S-NPP	25.70796	82.41885	01:41:29	N	0.30
56	JAUNPUR	MACHHALI SAHAR	S-NPP	25.74077	82.33742	01:41:29	N	0.60
57	JAUNPUR	MARIAHU	S-NPP	25.61283	82.61888	01:41:29	N	0.60
58	JAUNPUR	SHHGANJ	S-NPP	25.86695	82.74065	12:52:12	D	3.40
59	JAUNPUR	SHHGANJ	S-NPP	26.07002	82.59441	12:52:12	D	12.10
60	KANNAUJ	TIRWA	S-NPP	26.78383	79.79130	12:52:12	D	4.80
61	KANPUR DEHAT	RASULABAD	S-NPP	26.66912	79.87832	12:52:12	D	3.30
62	KAUSHAMBI	MANJHANPUR	S-NPP	25.37777	81.37466	12:52:12	D	12.70
63	KAUSHAMBI	MANJHANPUR	AQUA	25.43000	81.25900	13:55:58	D	8.00
64	KHERI	GOLA	S-NPP	28.16414	80.36307	12:52:12	D	3.80

65	KHERI	LAKHIMPUR	AQUA	27.89100	80.62900	13:55:58	D	6.00
66	KHERI	MOHMADI	S-NPP	27.92159	80.40976	01:41:29	N	0.50
67	KHERI	MOHMADI	S-NPP	27.95386	80.10455	01:41:29	N	1.00
68	KHERI	MOHMADI	S-NPP	27.98302	80.22506	12:52:12	D	3.30
69	KHERI	MOHMADI	AQUA	27.89400	80.23400	13:55:58	D	7.80
70	KHERI	MOHMADI	AQUA	27.89500	80.24600	13:55:58	D	7.50
71	KHERI	NIGHASAN	S-NPP	28.17837	80.88289	01:41:29	N	0.50
72	KHERI	NIGHASAN	S-NPP	28.18220	80.95654	12:52:12	D	2.90
73	KHERI	NIGHASAN	S-NPP	28.29611	80.77985	01:41:29	N	0.30
74	KHERI	PALIA KALAN	AQUA	28.50800	80.51200	13:55:58	D	10.90
75	KUSHINAGAR	HATA	S-NPP	26.71003	83.78967	12:52:12	D	2.40
76	KUSHINAGAR	HATA	S-NPP	26.76618	83.62315	12:52:12	D	1.40
77	KUSHINAGAR	HATA	S-NPP	26.77702	83.75057	12:52:12	D	2.20
78	KUSHINAGAR	HATA	S-NPP	26.79164	83.62648	12:52:12	D	4.50
79	KUSHINAGAR	HATA	S-NPP	26.80859	83.61118	12:52:12	D	2.10
80	KUSHINAGAR	HATA	S-NPP	26.82261	83.65162	12:52:12	D	2.20
81	KUSHINAGAR	HATA	S-NPP	26.82505	83.60338	12:52:12	D	1.80
82	KUSHINAGAR	HATA	S-NPP	26.87670	83.61424	12:52:12	D	9.10
83	KUSHINAGAR	HATA	S-NPP	26.88286	83.60860	12:52:12	D	7.60
84	KUSHINAGAR	HATA	S-NPP	26.88744	83.72014	12:52:12	D	2.70
85	KUSHINAGAR	HATA	S-NPP	26.89457	83.61482	12:52:12	D	1.70
86	KUSHINAGAR	HATA	S-NPP	26.90136	83.80309	12:52:12	D	2.20
87	KUSHINAGAR	HATA	S-NPP	26.90495	83.63433	12:52:12	D	1.40
88	KUSHINAGAR	HATA	S-NPP	26.91881	83.67470	12:52:12	D	4.00
89	KUSHINAGAR	HATA	S-NPP	26.92223	83.67398	12:52:12	D	3.20
90	KUSHINAGAR	KASAYA	S-NPP	26.62039	84.05061	12:52:12	D	2.90
91	KUSHINAGAR	KASAYA	S-NPP	26.78907	83.90646	12:52:12	D	2.50
92	MAHARAJGANJ	MAHARAJGANJ	S-NPP	26.89549	83.51439	12:52:12	D	5.90
93	MAHARAJGANJ	MAHARAJGANJ	S-NPP	26.89749	83.51485	12:52:12	D	6.00
94	MAHARAJGANJ	MAHARAJGANJ	S-NPP	26.94768	83.60013	12:52:12	D	5.20
95	MAHARAJGANJ	MAHARAJGANJ	S-NPP	26.98019	83.64531	12:52:12	D	3.00
96	MAHARAJGANJ	MAHARAJGANJ	S-NPP	26.99381	83.62079	12:52:12	D	2.50
97	MAHARAJGANJ	MAHARAJGANJ	S-NPP	26.99873	83.65006	12:52:12	D	2.00
98	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.02264	83.62338	12:52:12	D	2.00

99	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.03335	83.48685	12:52:12	D	4.60
100	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.04135	83.45011	12:52:12	D	3.40
101	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.04799	83.50999	12:52:12	D	4.90
102	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.04912	83.47476	12:52:12	D	8.00
103	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.05328	83.58290	12:52:12	D	2.60
104	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.06562	83.46689	12:52:12	D	2.90
105	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.07006	83.51405	12:52:12	D	7.60
106	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.19213	83.67551	12:52:12	D	1.40
107	MAHARAJGANJ	NAUTANWA	S-NPP	27.21329	83.37118	12:52:12	D	1.80
108	MAHARAJGANJ	NAUTANWA	S-NPP	27.30511	83.36479	12:52:12	D	5.40
109	MAHARAJGANJ	NICHLAUL	S-NPP	27.20106	83.68655	12:52:12	D	11.80
110	MAHARAJGANJ	NICHLAUL	S-NPP	27.24828	83.71532	12:52:12	D	3.40
111	MAHARAJGANJ	NICHLAUL	S-NPP	27.25169	83.71460	12:52:12	D	3.40
112	MAHARAJGANJ	NICHLAUL	S-NPP	27.25435	83.61115	12:52:12	D	1.30
113	MAHARAJGANJ	NICHLAUL	S-NPP	27.30663	83.66918	12:52:12	D	4.00
114	MAHARAJGANJ	NICHLAUL	S-NPP	27.30725	83.65181	12:52:12	D	11.00
115	MAHARAJGANJ	NICHLAUL	S-NPP	27.32712	83.66486	12:52:12	D	3.00
116	MAHARAJGANJ	NICHLAUL	S-NPP	27.34913	83.73327	12:52:12	D	2.90
117	MAHARAJGANJ	NICHLAUL	S-NPP	27.35935	83.73112	12:52:12	D	2.50
118	MAHARAJGANJ	NICHLAUL	AQUA	27.35500	83.71600	13:55:58	D	15.60
119	MAINPURI	BHOGAON	S-NPP	27.03732	79.18009	12:52:12	D	3.10
120	MAU	GHOSI	S-NPP	26.13849	83.55714	12:52:12	D	2.30
121	MAU	GHOSI	S-NPP	26.20451	83.53958	12:52:12	D	3.30
122	MEERUT	MEERUT	S-NPP	29.08797	77.50868	12:52:12	D	4.70
123	MORADABAD	BILARI	S-NPP	28.74016	78.76280	12:52:12	D	2.20
124	MORADABAD	BILARI	S-NPP	28.74166	78.76138	12:52:12	D	2.70
125	MORADABAD	THAKUR DWARA	S-NPP	29.13057	78.78242	12:52:12	D	12.10
126	MUZAFARNAGAR	BUDHANA	AQUA	29.25700	77.52300	13:55:58	D	6.70
127	MUZAFARNAGAR	MUZAFFARNAGAR	S-NPP	29.42546	77.70460	12:52:12	D	2.60
128	PILHIBHIT	BISALPUR	S-NPP	28.31026	79.72868	12:52:12	D	1.10
129	PILHIBHIT	BISALPUR	S-NPP	28.40743	79.83841	12:52:12	D	1.90
130	PILHIBHIT	BISALPUR	S-NPP	28.40814	79.83836	12:52:12	D	2.20
131	PILHIBHIT	PILHIBHIT	S-NPP	28.62085	79.72398	12:52:12	D	2.90
132	PILHIBHIT	PURANPUR	S-NPP	28.47020	79.98328	12:52:12	D	8.50

133	PRATAPGARH	KUNDA	S-NPP	25.68250	81.73461	12:52:12	D	2.20
134	PRATAPGARH	PATTI	S-NPP	26.04777	82.07189	12:52:12	D	5.50
135	RAIBEARELI	DALMAU	S-NPP	26.07105	81.07494	01:41:29	N	0.70
136	RAIBEARELI	MAHARAJGANG	S-NPP	26.34875	81.38197	12:52:12	D	3.70
137	RAIBEARELI	RAEBARELI	S-NPP	26.34684	81.22227	12:52:12	D	4.50
138	RAIBEARELI	SALON	S-NPP	26.16617	81.40166	12:52:12	D	3.00
139	RAIBEARELI	SALON	S-NPP	26.20830	81.56575	12:52:12	D	3.20
140	RAIBEARELI	TILOI	S-NPP	26.24759	81.48936	12:52:12	D	4.10
141	RAIBEARELI	TILOI	S-NPP	26.29320	81.52217	12:52:12	D	5.30
142	RAIBEARELI	TILOI	S-NPP	26.35899	81.56353	12:52:12	D	4.70
143	RAIBEARELI	TILOI	AQUA	26.28900	81.52500	13:55:58	D	7.00
144	RAMPUR	SHAHBAD	S-NPP	28.51796	79.06364	12:52:12	D	1.80
145	RAMPUR	TANDA	S-NPP	29.10790	78.97569	12:52:12	D	3.50
146	RAMPUR	TANDA	S-NPP	29.10908	78.97630	12:52:12	D	3.20
147	SANTKABIRNAGAR	GHANGHATA	S-NPP	26.64749	83.05701	12:52:12	D	6.00
148	SANTKABIRNAGAR	MEHDAWAL	S-NPP	27.00796	83.02437	12:52:12	D	3.80
149	SHAHJAHANPUR	PUWANYA	S-NPP	27.97939	79.93461	01:41:29	N	1.30
150	SHAHJAHANPUR	PUWANYA	S-NPP	28.09580	79.92519	01:41:29	N	1.20
151	SHAHJAHANPUR	PUWANYA	S-NPP	28.09973	80.04120	01:41:29	N	0.50
152	SHAHJAHANPUR	PUWANYA	S-NPP	28.10932	79.94549	12:52:12	D	2.60
153	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.99102	79.85719	12:52:12	D	2.20
154	SHAHJAHANPUR	TILHAR	S-NPP	28.02482	79.83617	12:52:12	D	2.40
155	SHAMLI	SHAMLI	AQUA	29.44500	77.40600	13:55:58	D	4.50
156	SHARANPUR	RAMPUR MANIHARRAN	S-NPP	29.66943	77.55789	12:52:12	D	2.80
157	SHARANPUR	SHARANPUR	S-NPP	30.12330	77.54360	12:52:12	D	2.40
158	SHARANPUR	SHARANPUR	S-NPP	30.12565	77.54007	12:52:12	D	9.70
159	SHRAWASTI	BHINGA	S-NPP	27.87311	81.63931	12:52:12	D	1.80
160	SIDDHARTHANAGAR	BANSI	S-NPP	27.14608	82.81810	12:52:12	D	8.50
161	SIDDHARTHANAGAR	ITWA	S-NPP	27.32573	82.53947	12:52:12	D	2.30
162	SIDDHARTHANAGAR	ITWA	S-NPP	27.36174	82.59740	12:52:12	D	3.60
163	SIDDHARTHANAGAR	ITWA	S-NPP	27.36528	82.59662	12:52:12	D	3.60
164	SIDDHARTHANAGAR	ITWA	S-NPP	27.40890	82.66323	12:52:12	D	2.70
165	SIDDHARTHANAGAR	NAUGARH	S-NPP	27.37727	83.10302	12:52:12	D	4.10
166	SIDDHARTHANAGAR	SHOHRATGARH	S-NPP	27.31881	82.97481	12:52:12	D	2.40

167	SITAPUR	SITAPUR	S-NPP	27.67317	80.58913	12:52:12	D	4.10
168	SITAPUR	SITAPUR	S-NPP	27.67380	80.59125	12:52:12	D	3.80
169	SULTANPUR	KADIRPUR	S-NPP	26.17078	82.52583	12:52:12	D	3.10
170	SULTANPUR	KADIRPUR	S-NPP	26.23021	82.48127	12:52:12	D	3.20
171	SULTANPUR	KADIRPUR	S-NPP	26.24721	82.42888	12:52:12	D	4.70
172	SULTANPUR	LAMBHUA	S-NPP	26.09010	82.17883	12:52:12	D	6.30
173	UNNAO	SAFIPUR	S-NPP	26.84817	80.30275	01:41:29	N	0.70

Details of residue burning events in Rajasthan on 29-Nov-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	CHITTAURGARH	CHITTAURGARH	S-NPP	24.76571	74.60715	01:41:29	N	2.40

Details of residue burning events in Madhya Pradesh on 29-Nov-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	GWALIOR	BHITARWAR	AQUA	25.83700	78.04000	13:55:58	D	6.90
2	GWALIOR	DABRA	S-NPP	25.94790	78.24989	12:52:12	D	3.30
3	GWALIOR	DABRA	AQUA	25.84500	78.23500	13:55:58	D	7.00
4	GWALIOR	DABRA	AQUA	25.84700	78.24500	13:55:58	D	5.20
5	REWA	HUZUR	S-NPP	24.48250	81.22791	12:52:12	D	1.60
6	SATNA	AMARPATAN	S-NPP	24.38568	81.20290	12:52:12	D	2.10
7	SATNA	MAIHAR	S-NPP	24.25540	80.78553	12:52:12	D	6.70
8	SATNA	MAIHAR	S-NPP	24.39585	80.86140	12:52:12	D	3.50
9	SATNA	RAMPURBAGHLEAN	S-NPP	24.40229	81.04762	12:52:12	D	4.10
10	SATNA	RAMPURBAGHLEAN	S-NPP	24.56409	81.01565	12:52:12	D	12.70
11	SATNA	RAMPURBAGHLEAN	S-NPP	24.56737	81.01086	12:52:12	D	3.40

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

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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](#)

Detail of extent of the funds received and the details of their utilization for Non-attainment Cities (NAC) of Rajasthan state

Cities	Activities	Fund Allotted (in cr)	Fund Utilised (in cr)
Jaipur	End to End paving of the roads	241.75	186.85
	Greening of open spaces/greening along roads	37.8	24.6
	Road repair and maintenance	15.11	11.84
	Traffic junction improvements	1.5	0.81
	Water sprinklers & mechanical sweeping, Road sweeping and removing of road dust activities	4.9	0.42
	Installation of 2 CAAQMS	1.44	1.44
	Public Awareness	0.66	0.65
	Equipment for collection and transportation of C&D waste, Garden waste compost machine, signage of roads, drain and silt cleaning	15.72	9.18
	Mobile Van	1.20	1.20
	Mobile Enforcement Unit	0.18	0.18
	Total of Jaipur city	320.26	237.17
Jodhpur	End to End paving of the roads	62.5	47.59
	Greening of open spaces/greening along roads	10.06	4.49
	Cleaning and suppression of road dust	4.52	1.64
	1 no Biomass pit construction	0.50	0.47
	Public Awareness (5 no of display boards)	1.14	0.87
	Installation of 2 CAAQMS	1.44	1.44
	Mobile Enforcement unit	0.18	0.18
	Total of Jodhpur city	80.34	56.68
Kota	End to end paving of roads	38.49	10.22
	Greening of open spaces/greening along roads	33.56	16.33
	Cleaning and suppression of road dust	6.83	5.94
	Installation of 2 CAAQMS	1.44	1.44
	Source Apportionment study of Kota city	0.68	0.68
	Public Awareness	0.30	0.29
	Greening & Paving Activities, Widening of roads, Transfer Station, Ensure proper collection of horticulture waste (Biomass) and composting cum gardening approach	17.82	15.30
	Mobile Enforcement Unit	0.18	0.18
	Total of Kota city	99.30	50.38
	End to end paving of roads	6.9	2.53

Alwar	Greening of urban spaces/ greening along roads	0.70	0.1
	Road repair and maintenance	5.83	3.41
	Water sprinklers & mechanical sweeping, Road sweeping and removing of road dust activities	1.5	0.74
	Public Awareness(Sunboards:39 Hoardings:19)	0.07	0.07
	Total of Alwar city	15.00	6.85
Udaipur	End to End paving of the roads	8.81	7.17
	Greening of open spaces/greening along roads	1.5	0
	Traffic junction improvements	0.47	0.165
	Purchase of 10 antismog guns	3.62	1.99
	Public Awareness	0.32	0.06
	Total of Udaipur city	14.72	9.385