

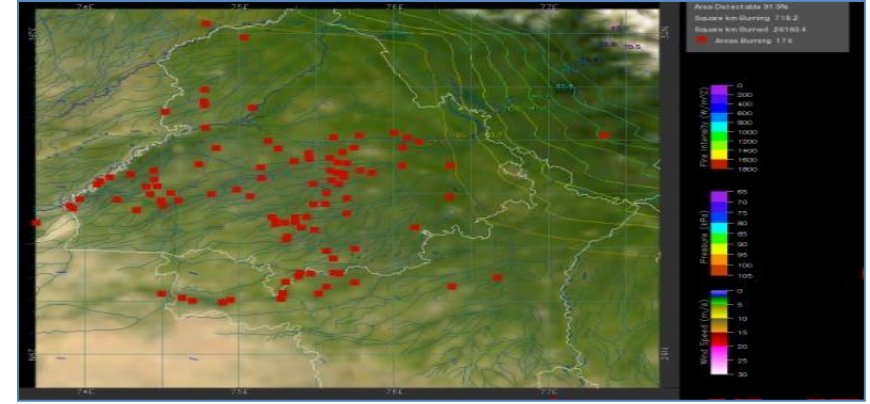
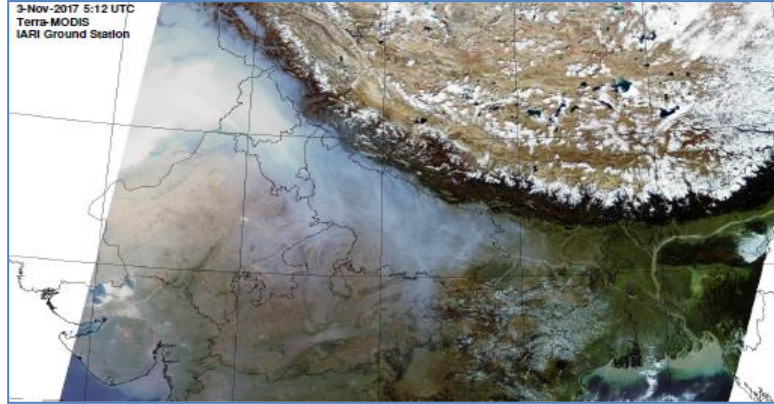


# MONITORING PADDY RESIDUE BURNING IN INDIA USING SATELLITE REMOTE SENSING DURING 2024

Bulletin  
No. 32

Events Date:  
16-Oct-2024

Issued on:  
16-Oct-2024



Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS)  
Laboratory,

Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012

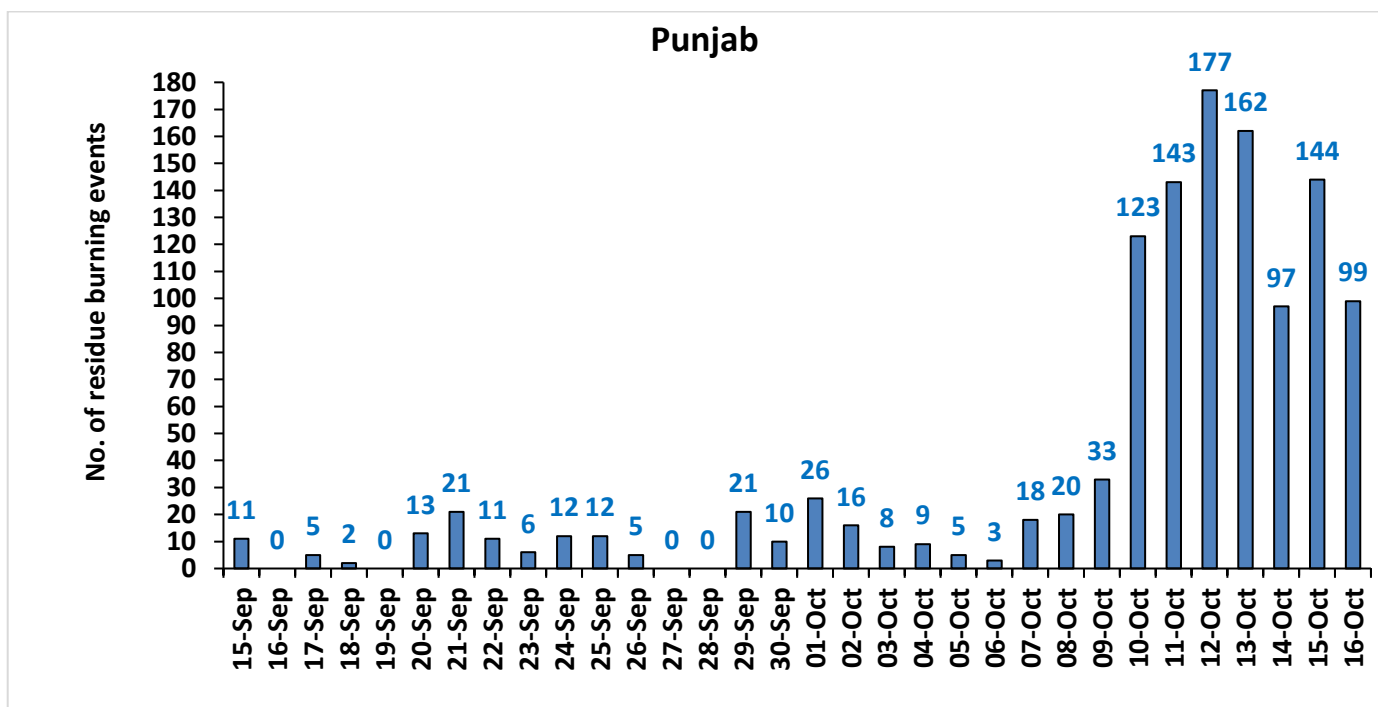
<https://creams.iari.res.in>



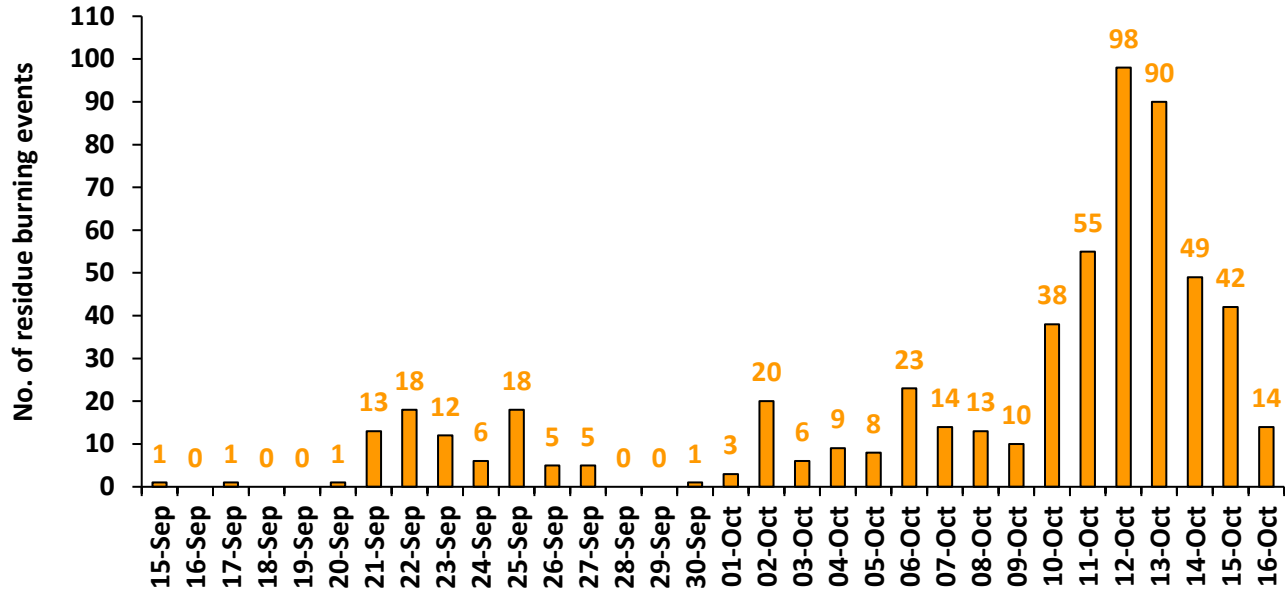
## Highlights for 16-Oct-2024

- The active fire events due to rice residue burning were monitored using satellite remote sensing, following the "Standard Protocol " recommended by CAQM. The data from JPSS-1 and JPSS-2 satellites are included from 10-Oct-2024 onwards.
- Satellites detected **385** residue burning events in the six study States on **16-Oct-2024**.
- The state wise events detected on **16-Oct-2024** were **99** in Punjab, **14** in Haryana, **59** in UP, **01** in Delhi, **100** in Rajasthan and **112** in MP.
- Total **2784** burning events were detected in the six states between **15-Sept-2024** and **16-Oct-2024**, which are distributed as **1212**, **573**, **587**, **08**, **193** and **211** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.
- Detection of burning events was hampered by the presence of scattered clouds over parts of Haryana, Delhi, Rajasthan and western Uttar Pradesh states.

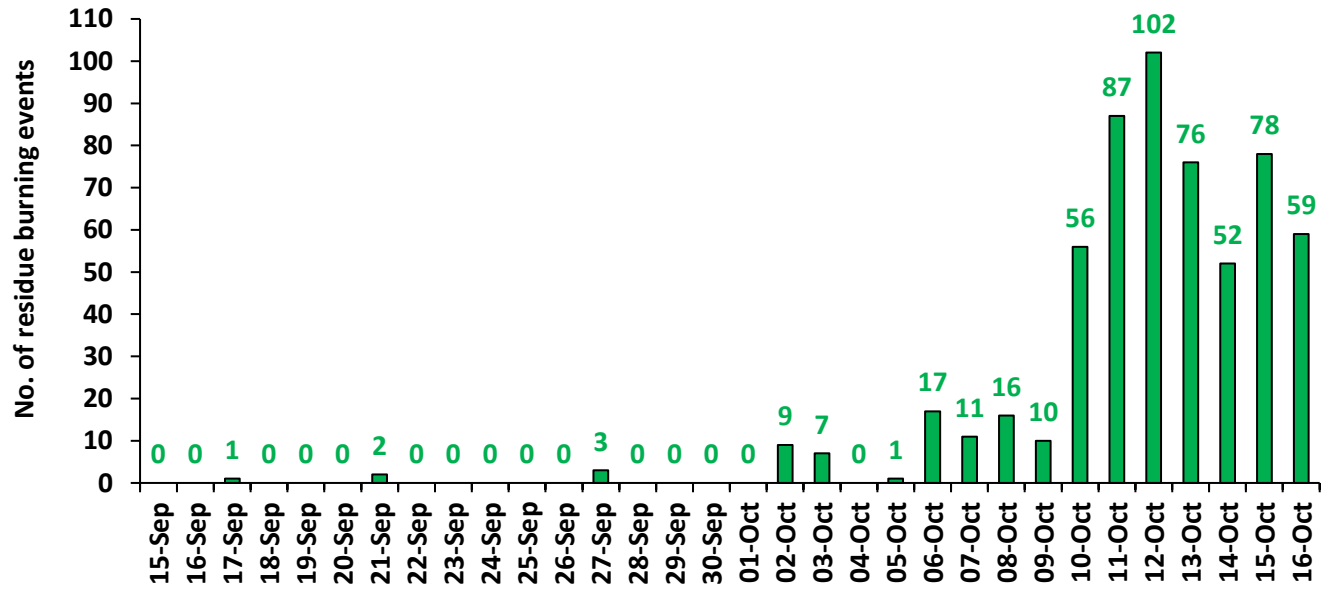
### Temporal distribution of rice residue burning events for the study States in 2024



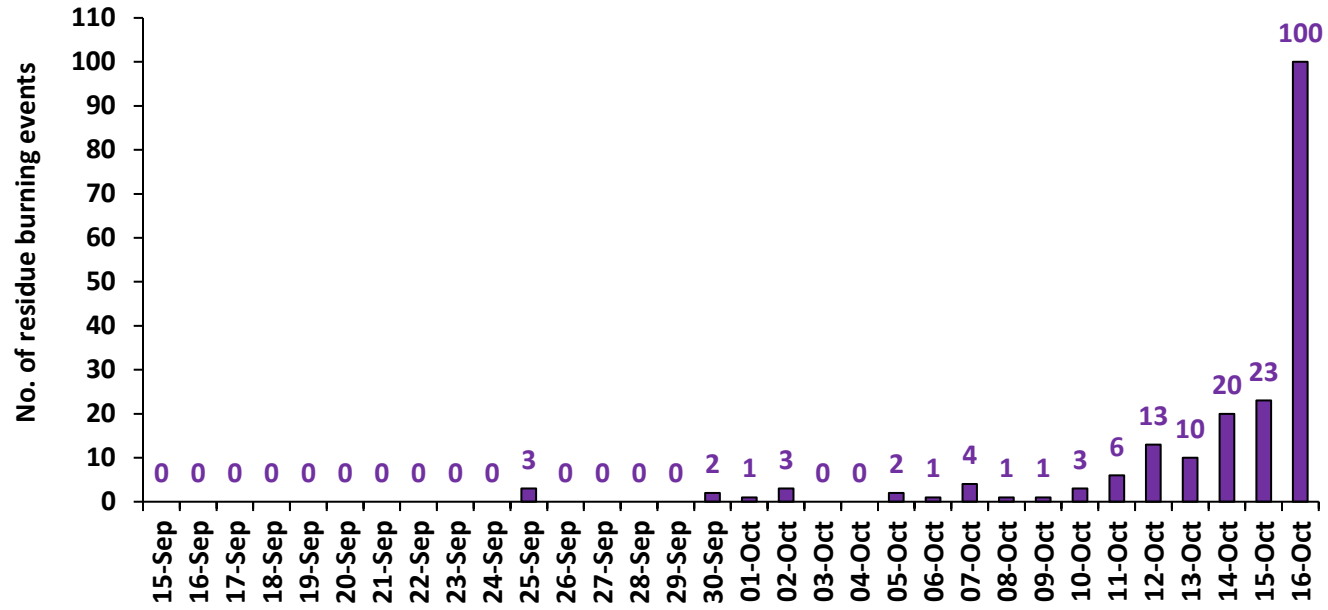
### Haryana



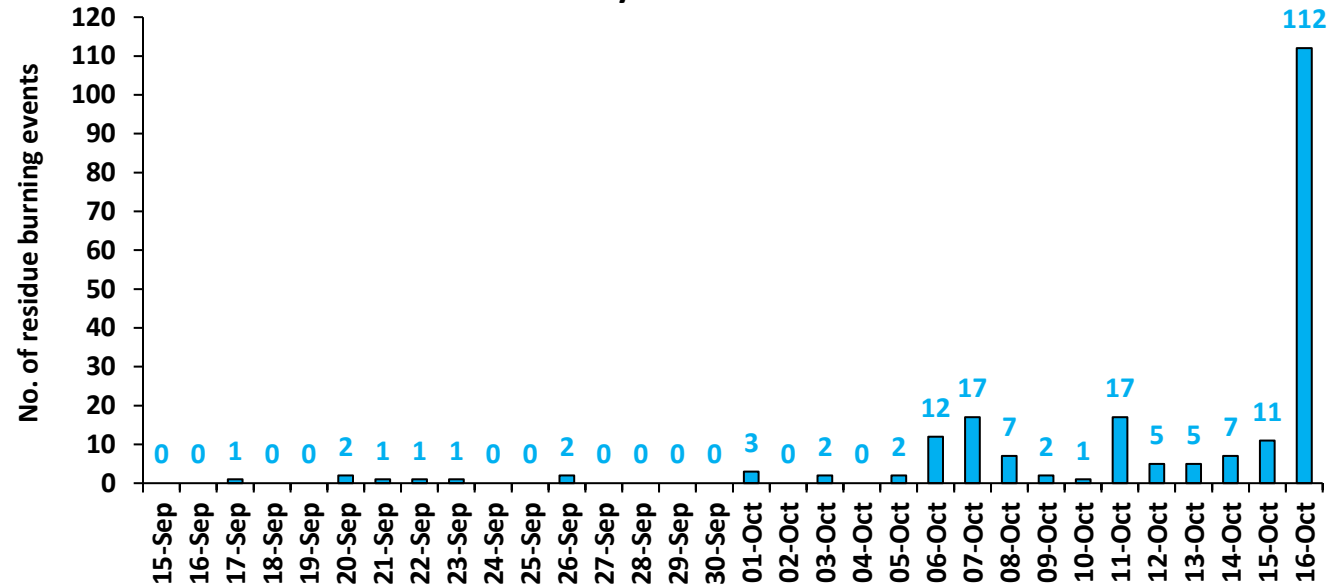
### Uttar Pradesh



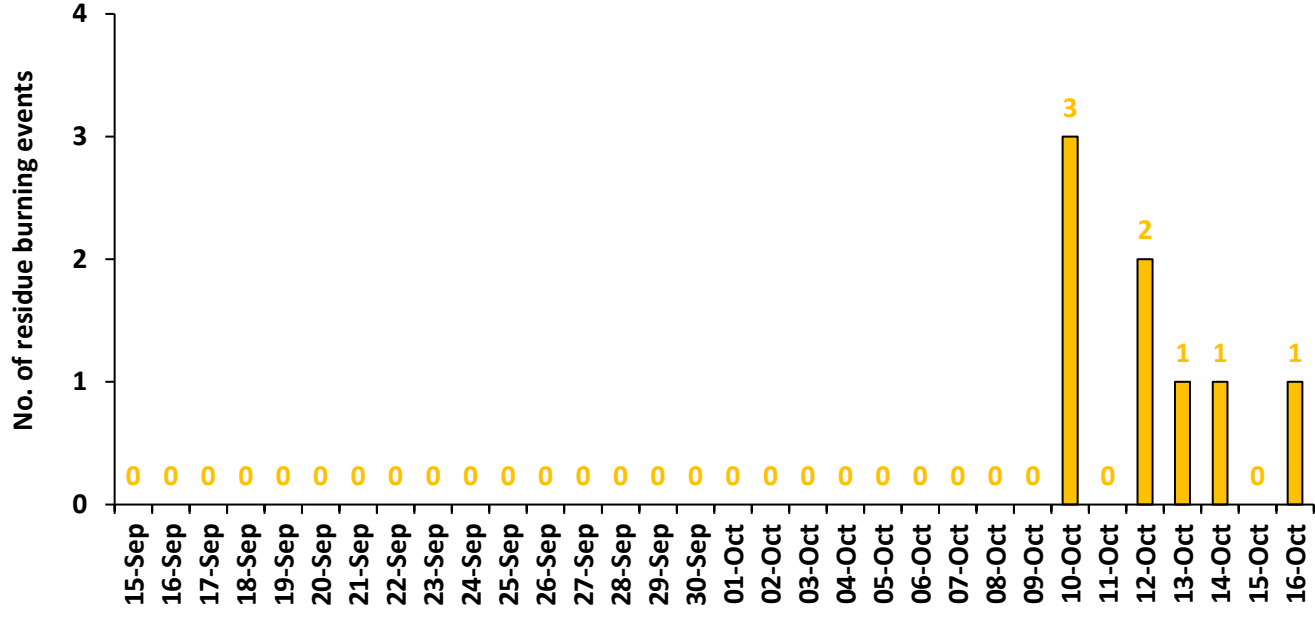
### Rajasthan



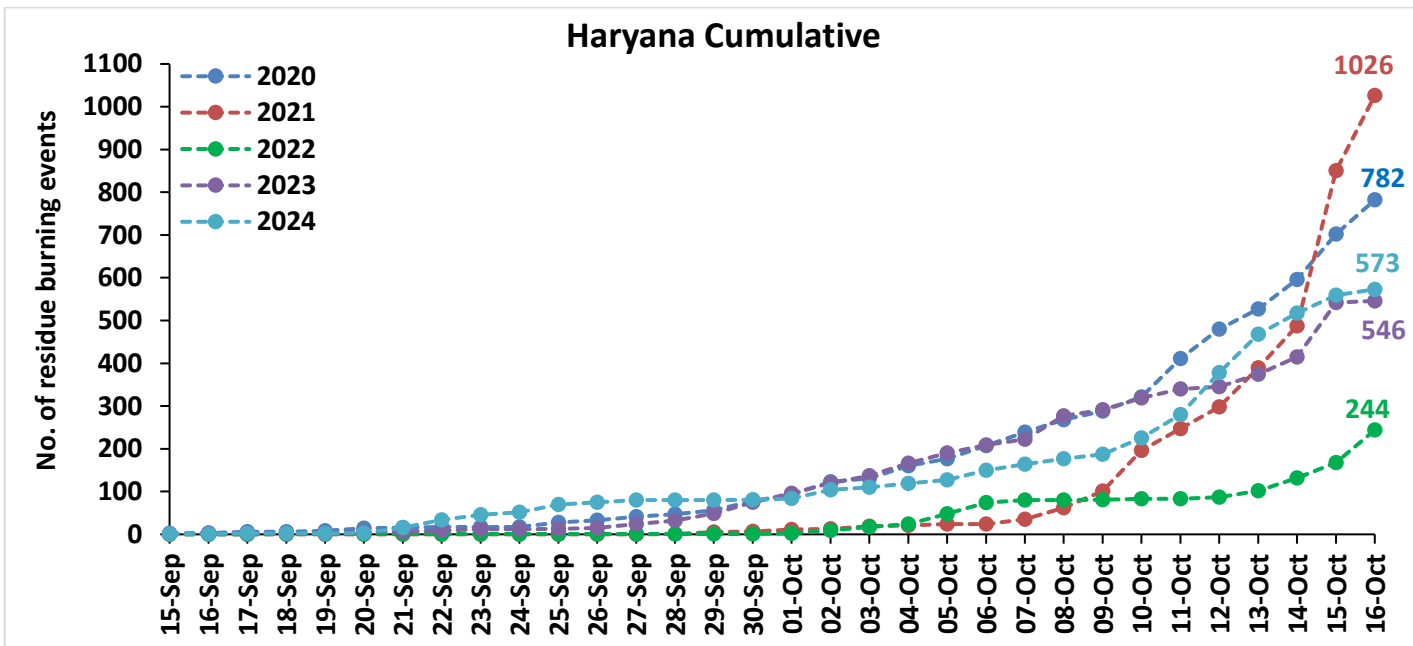
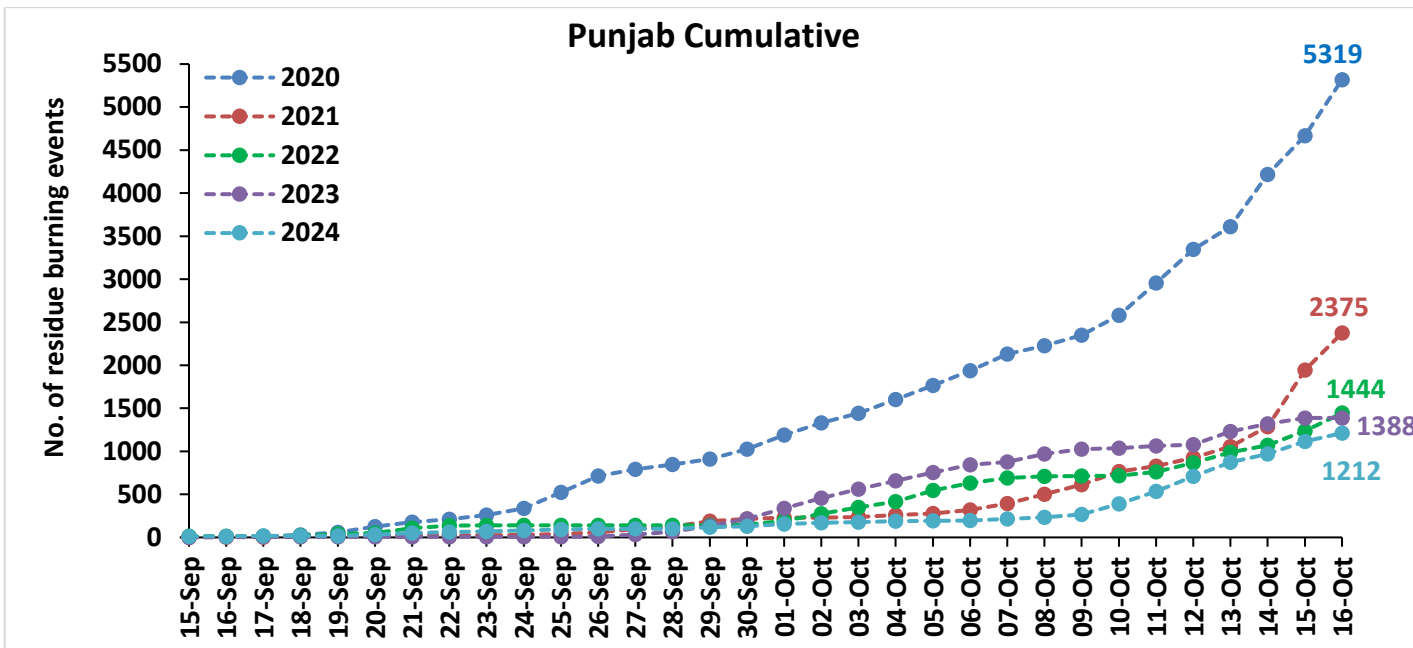
### Madhya Pradesh

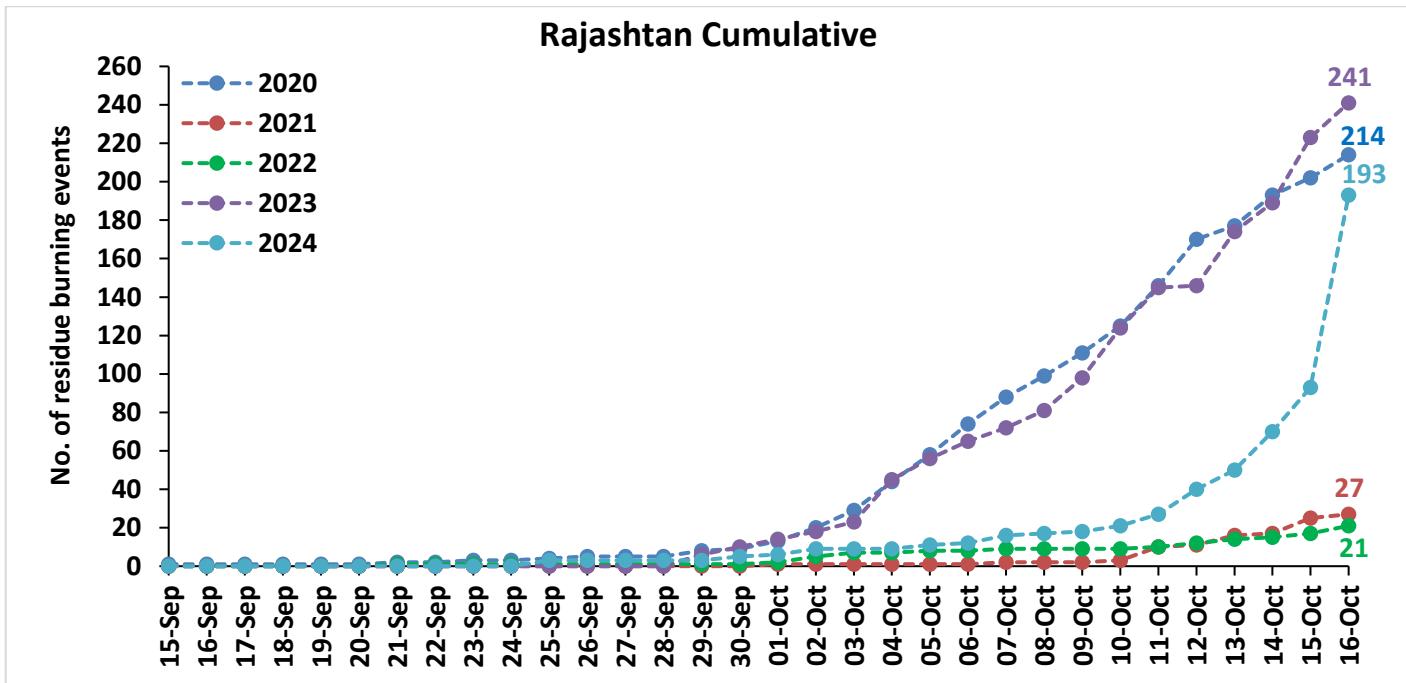
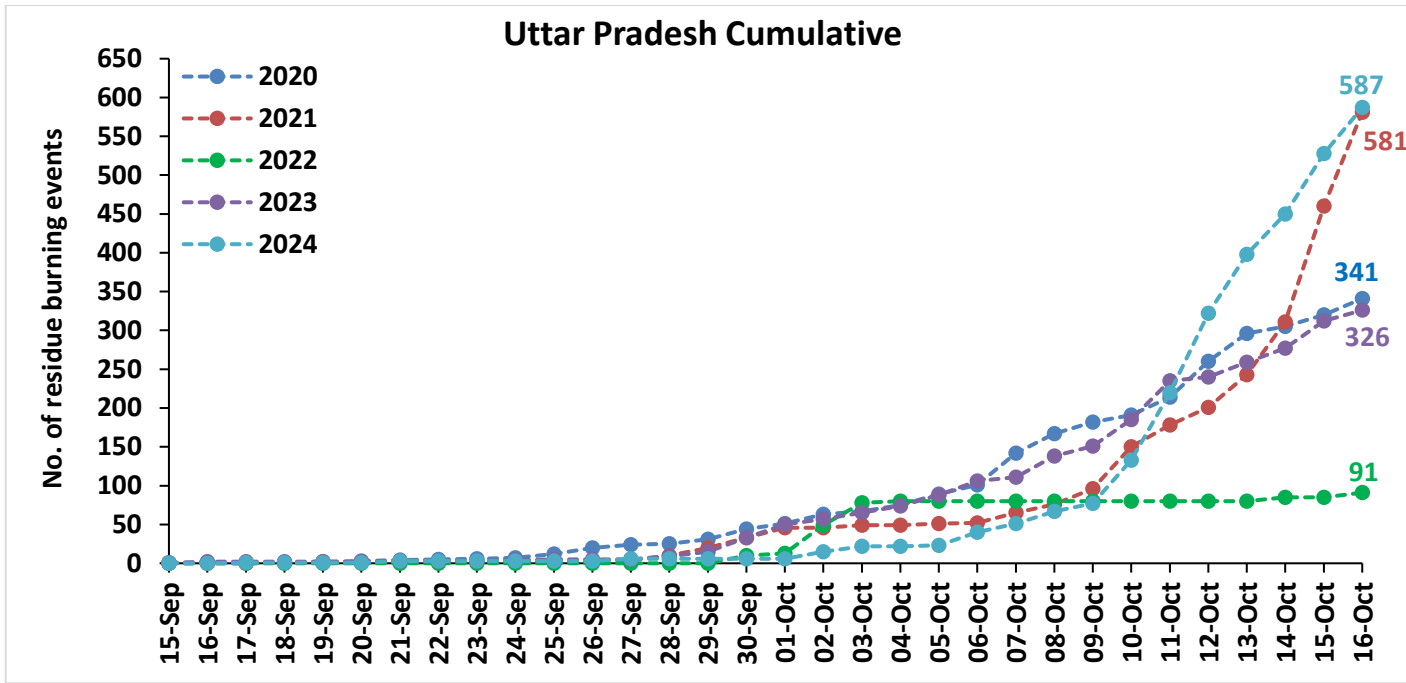


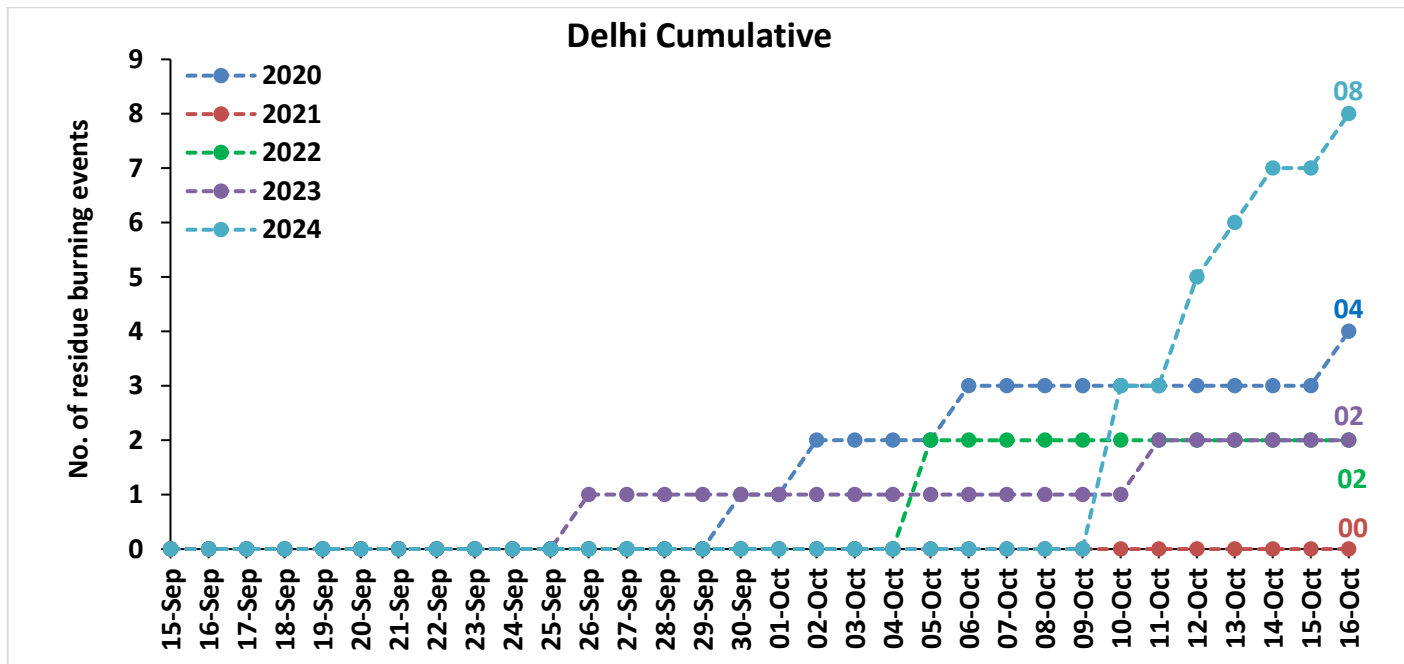
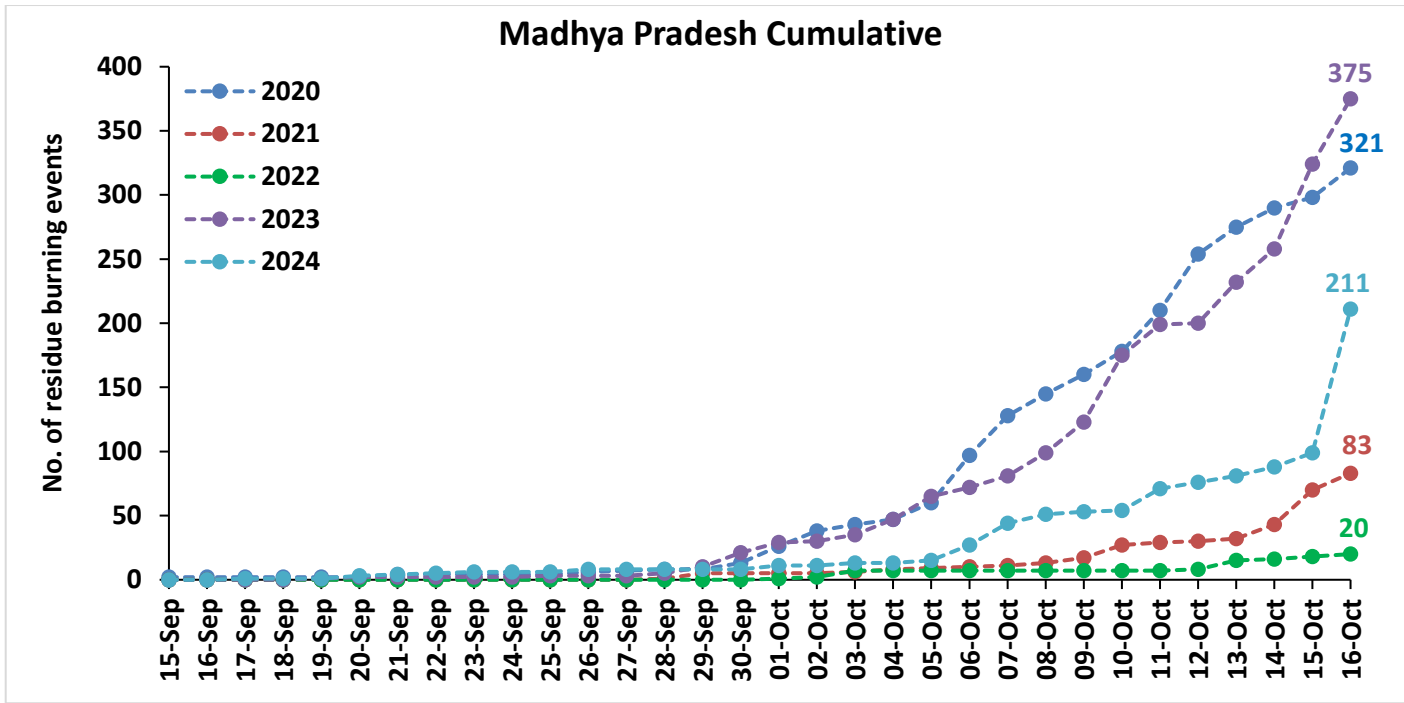
# Delhi



**Comparison of residue burning events in current year (2024) with previous years (2020, 2021, 2022 and 2023) for the study States**

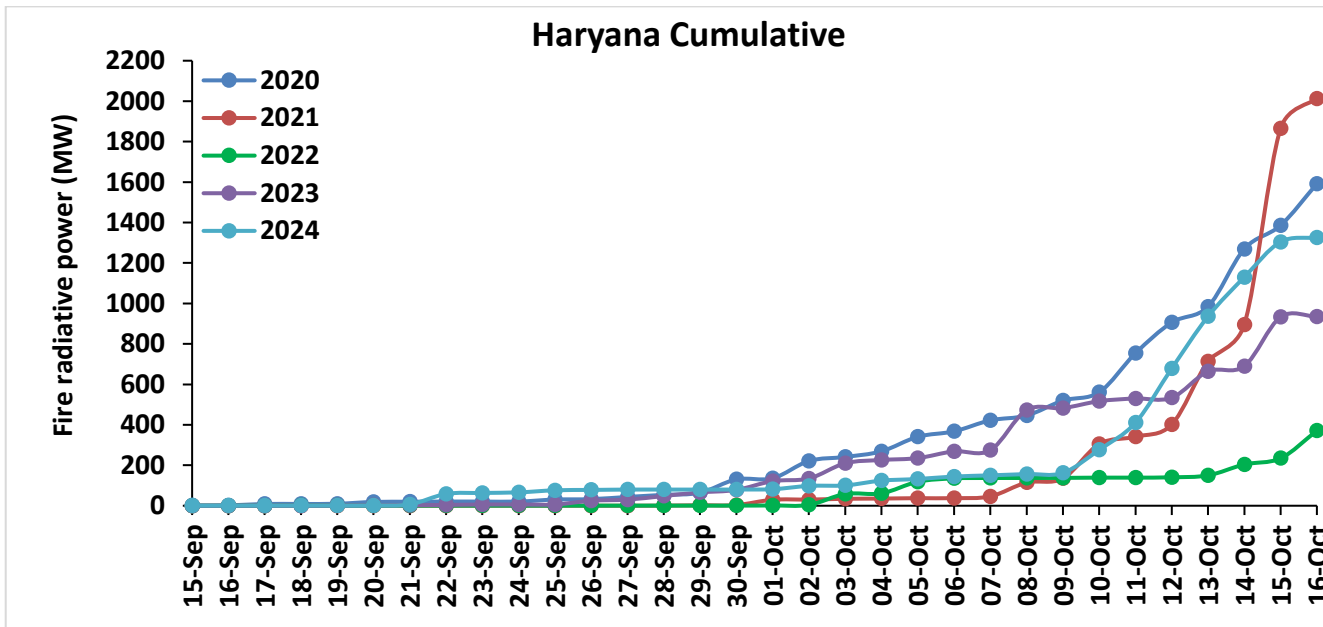
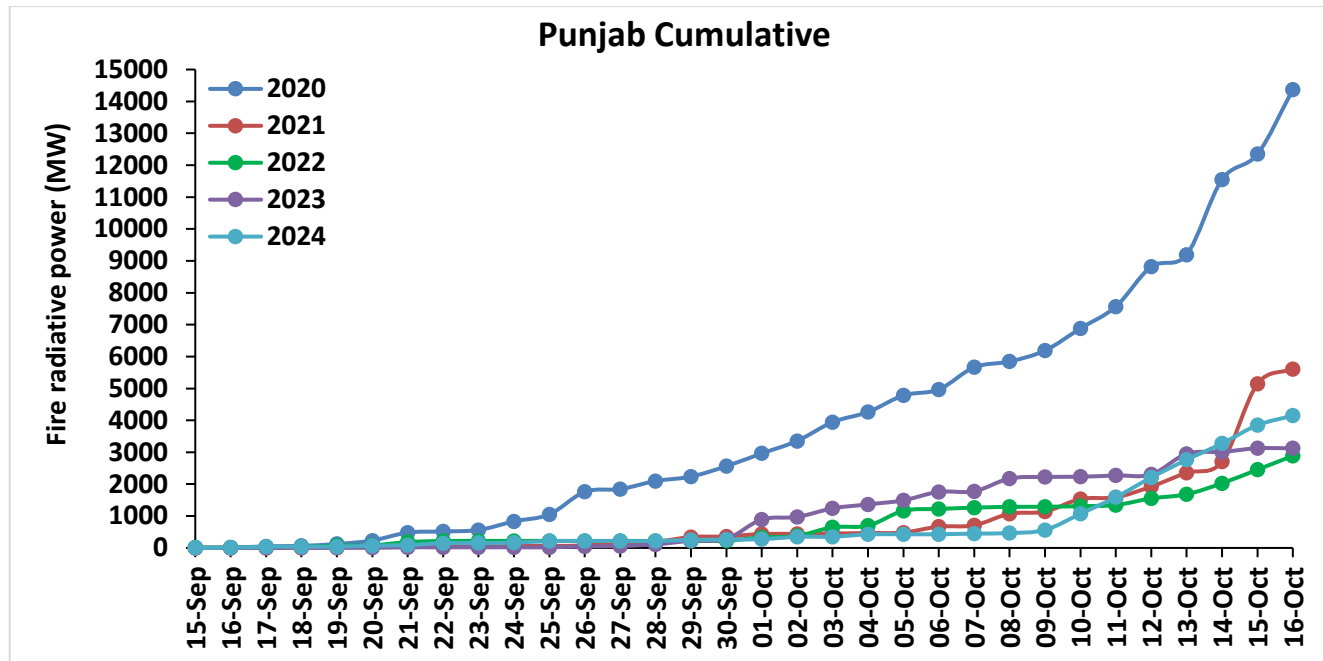




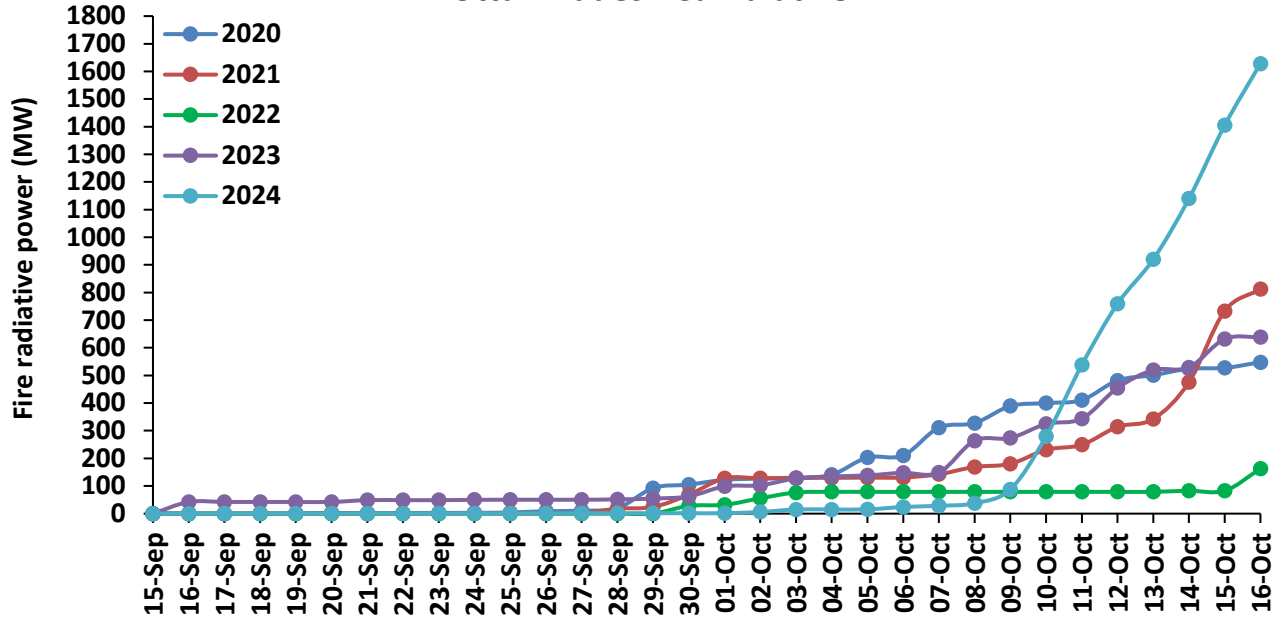




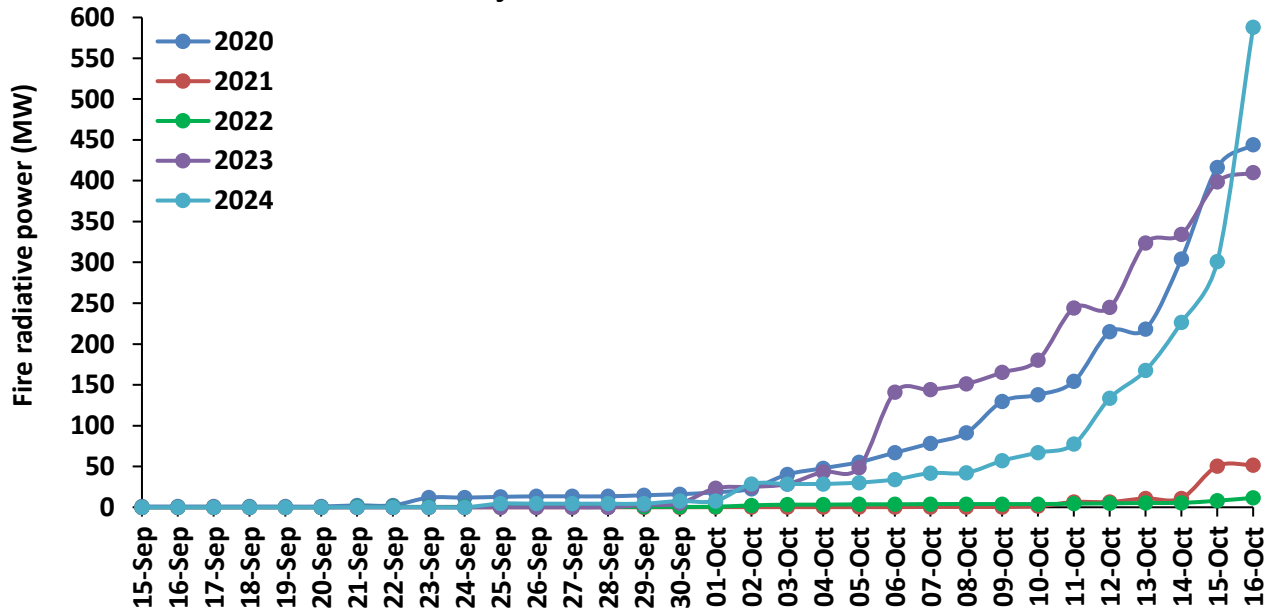
**Comparison of residue burning fire power in current year (2024) with previous years (2020,2021,2022 and 2023) for the study States**



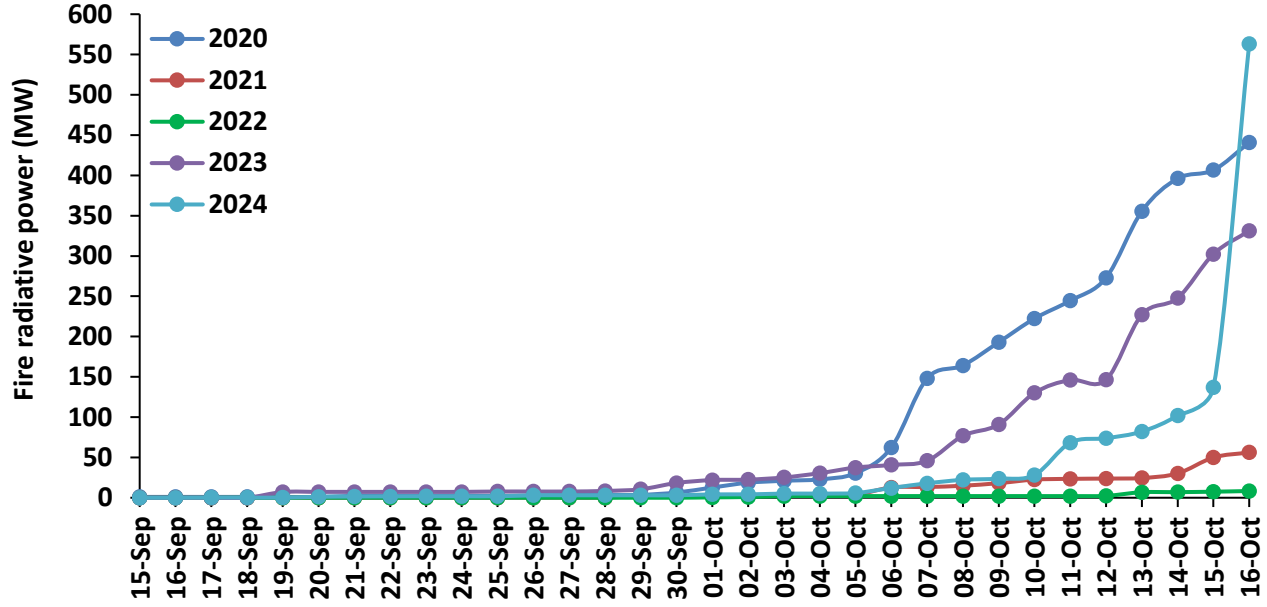
### Uttar Pradesh Cumulative



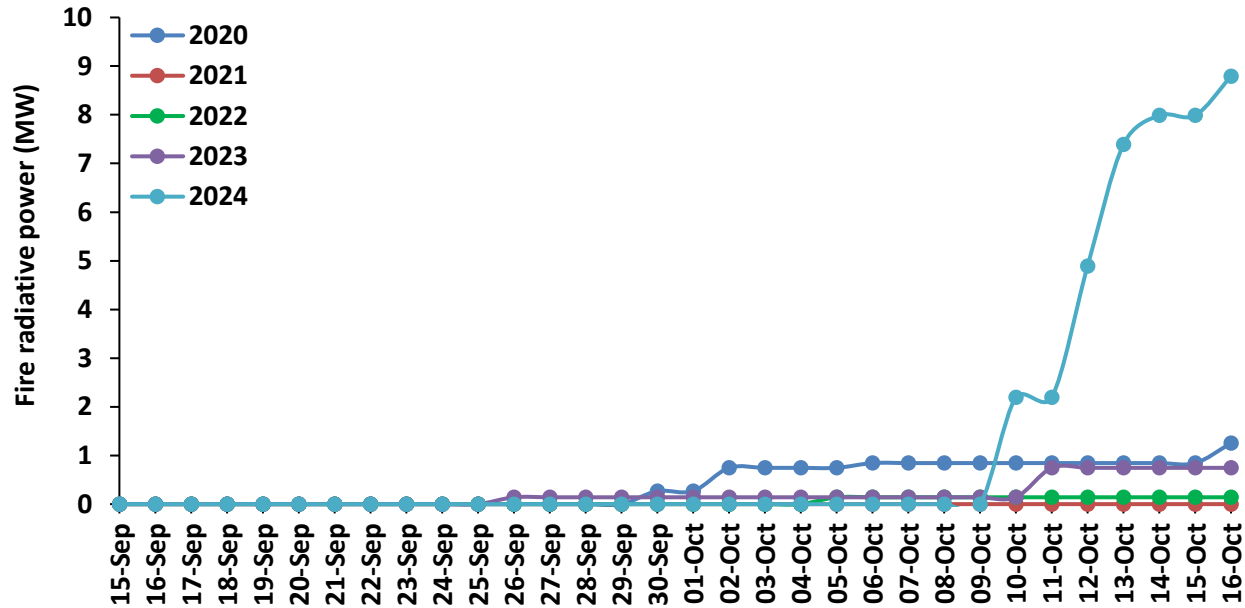
### Rajasthan Cumulative



### Madhya Pradesh Cumulative

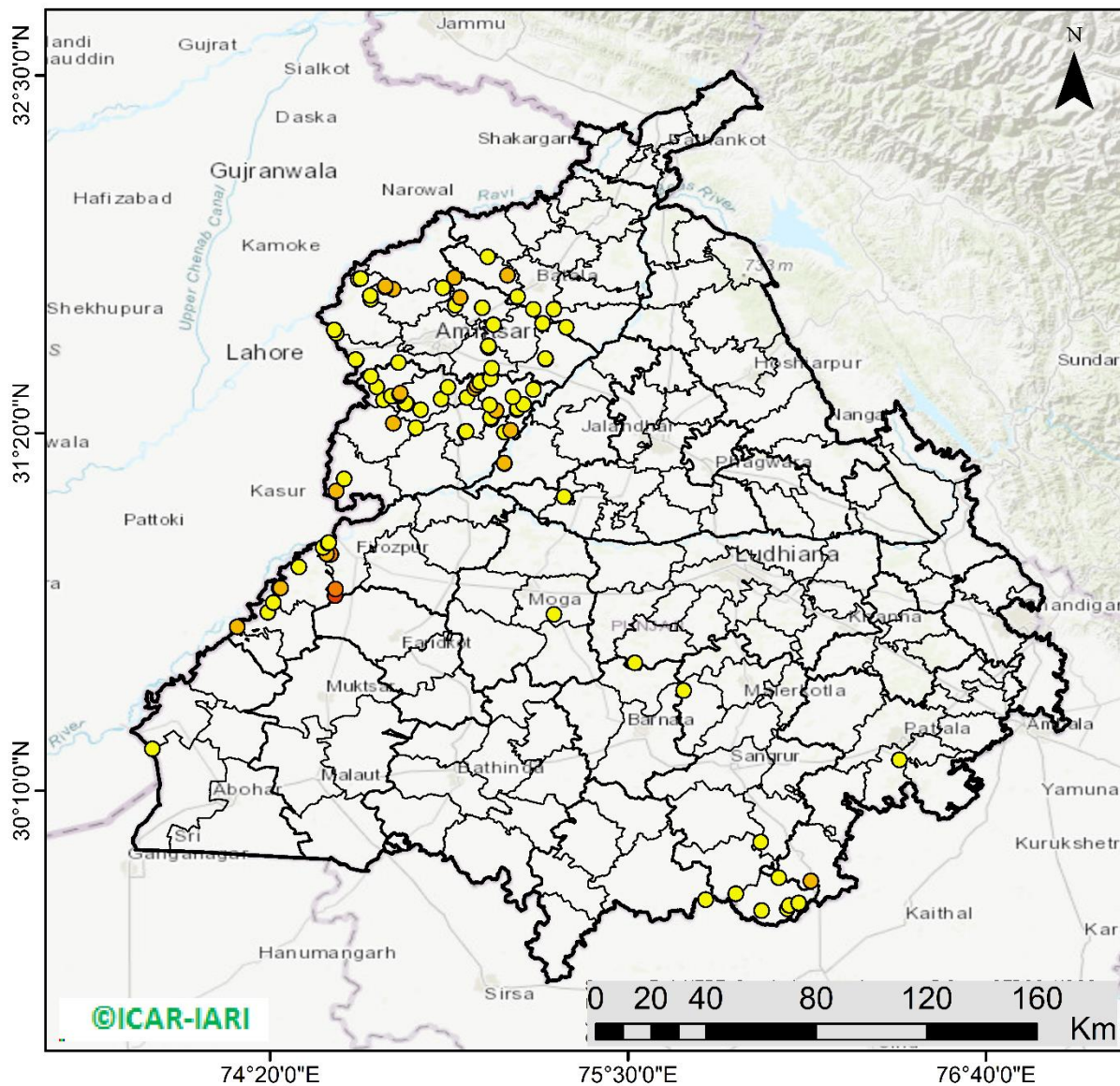


### Delhi Cumulative



# Punjab

## RICE RESIDUE BURNING IN PUNJAB



**99** burning events detected in Punjab during (16th Oct 2024)

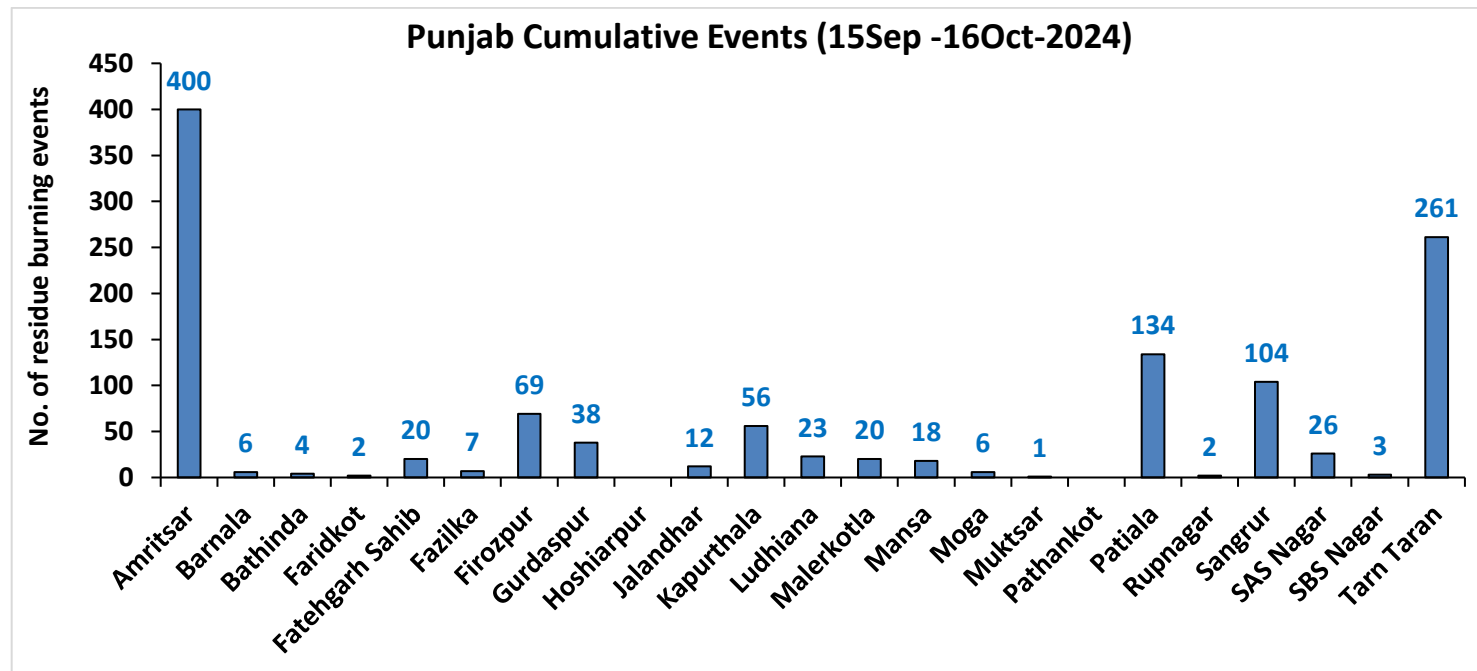
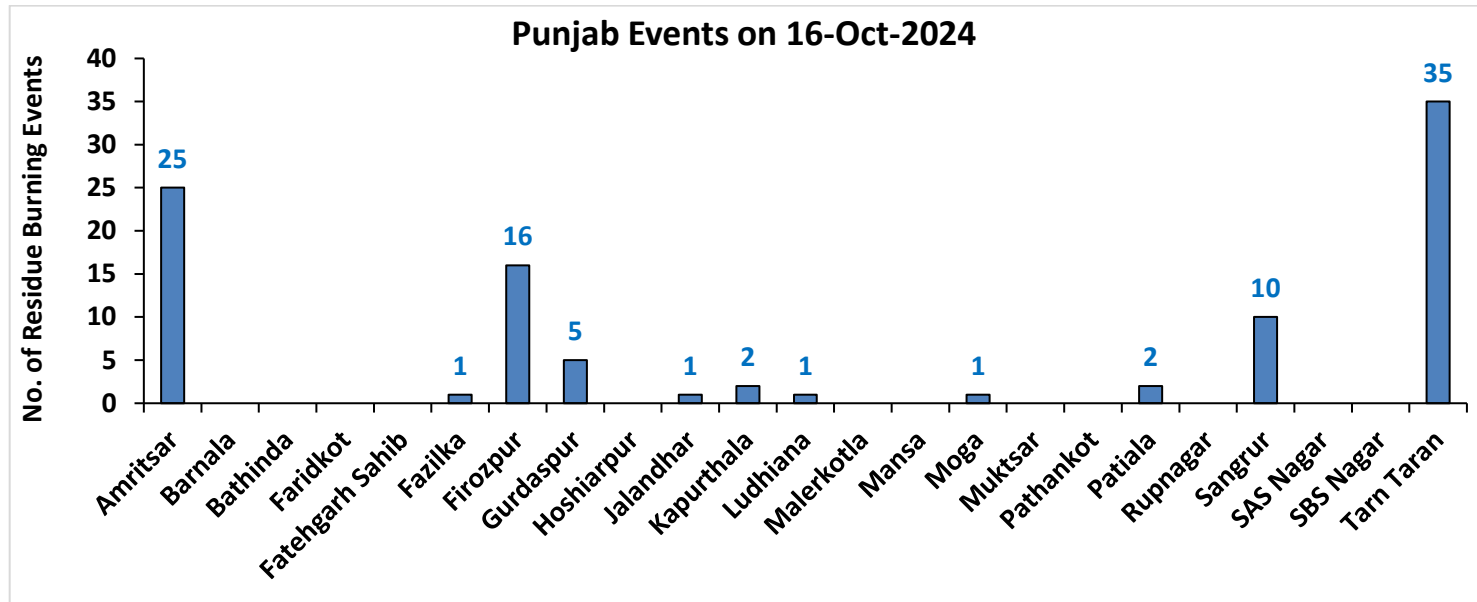
### Fire Intensity (W/m<sup>2</sup>)

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



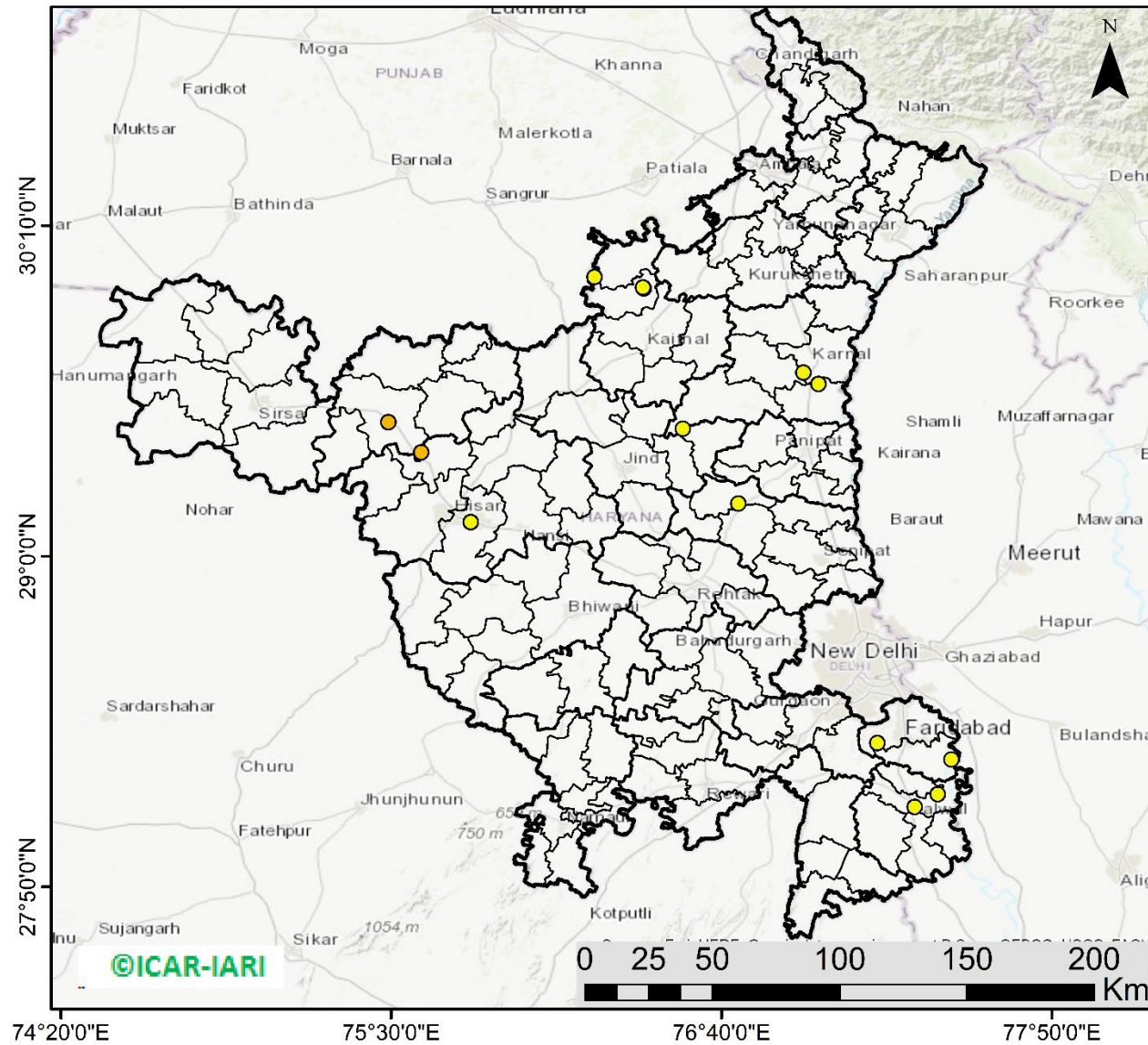
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

## District-wise cumulative number of residues burning events in Punjab (15Sep-16Oct-2024)



# Haryana

## RICE RESIDUE BURNING IN HARYANA



**14** burning events detected in Haryana on (16th Oct 2024)

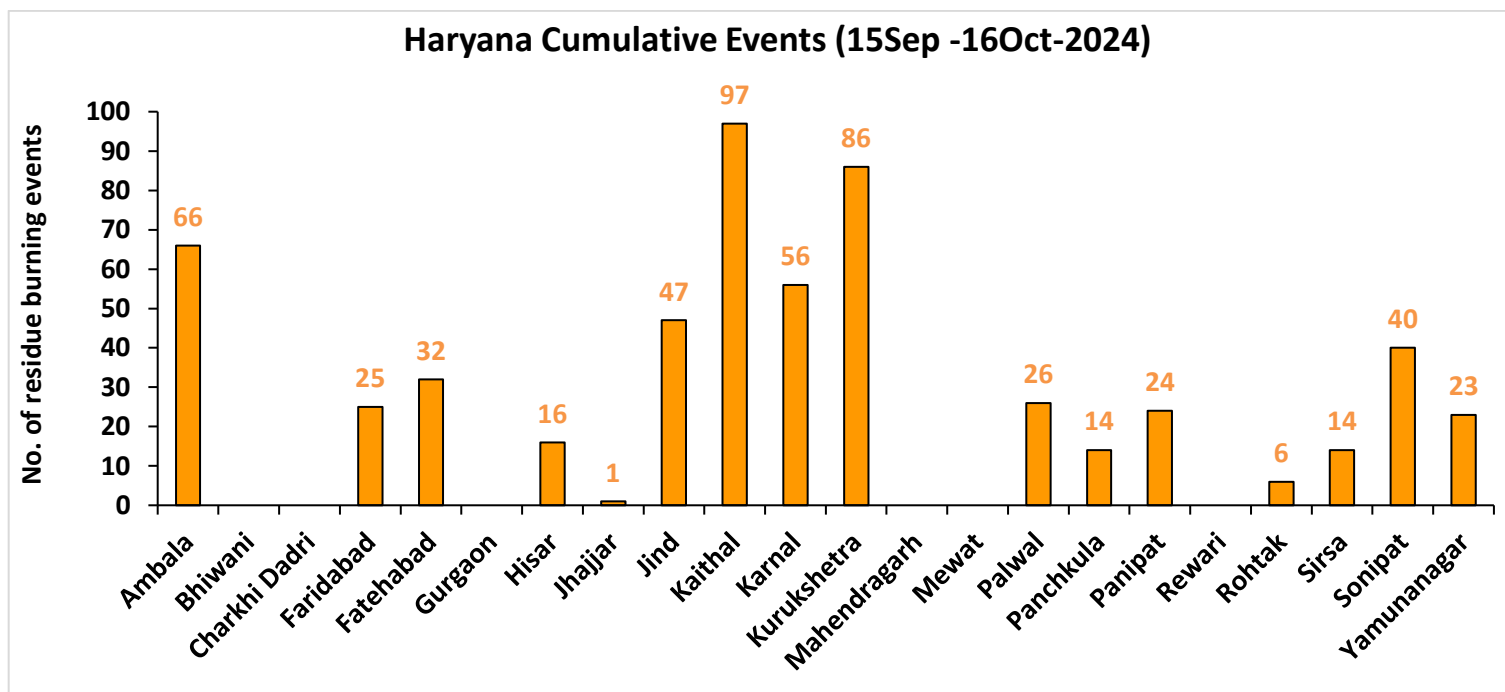
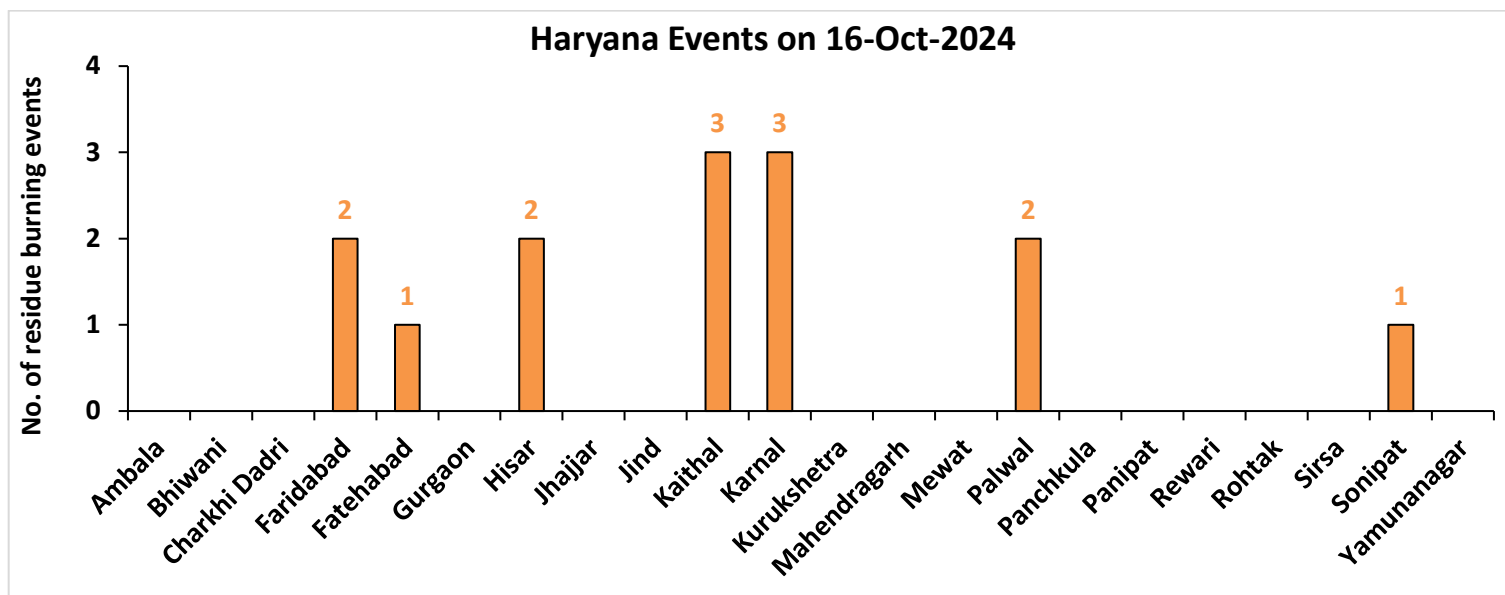
### Fire Intensity (W/m<sup>2</sup>)

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



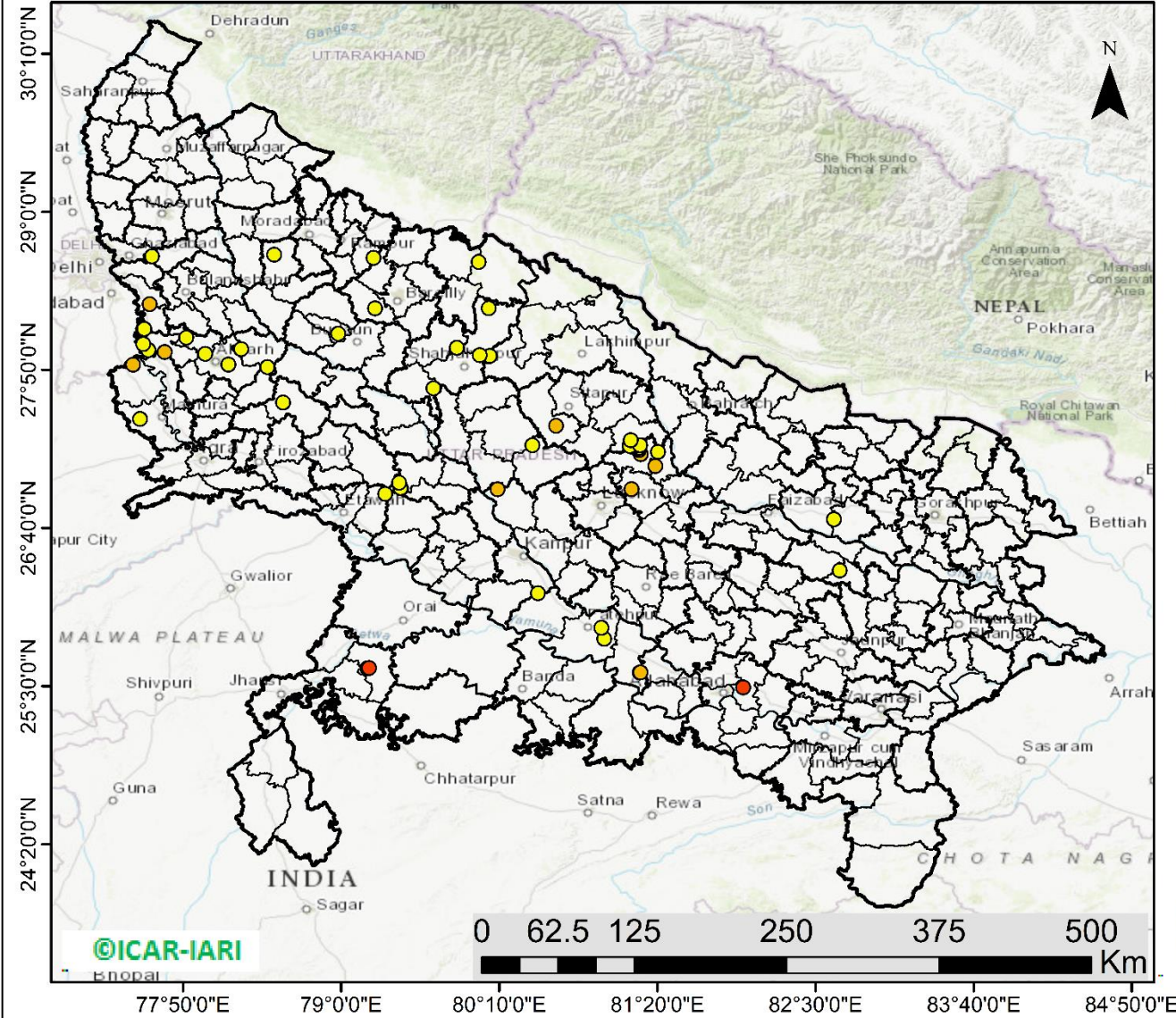
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

## District-wise cumulative number of residues burning events in Haryana (15Sep-16Oct-2024)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



59 burning events detected in Uttar Pradesh on (16th Oct 2024)

Fire Intensity (W/m2)

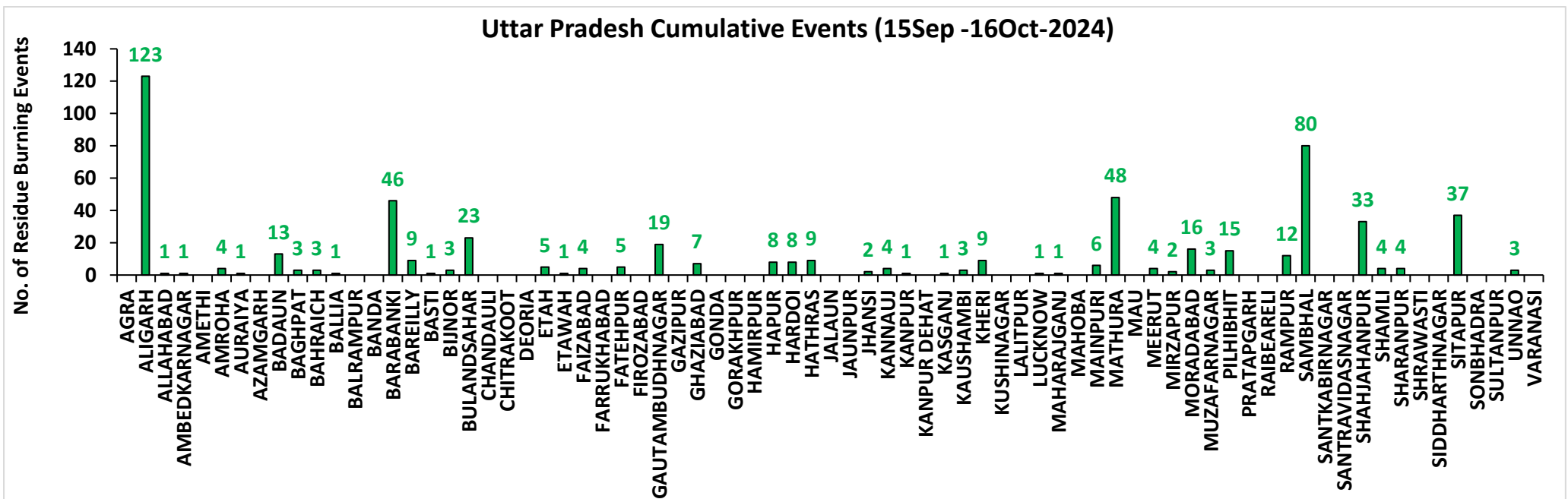
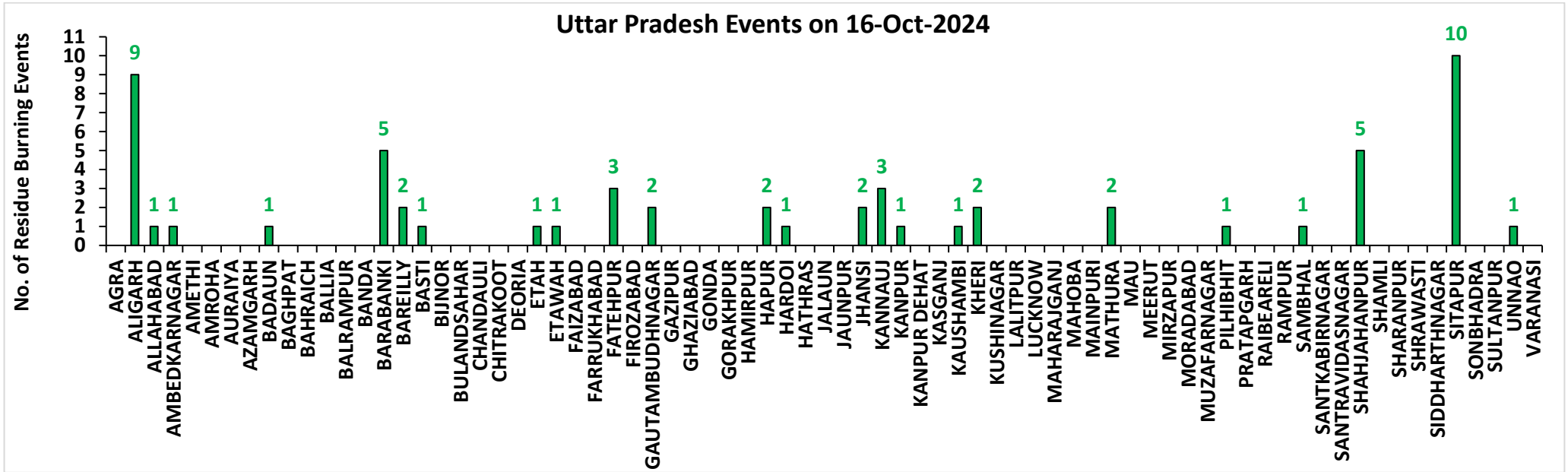
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20



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

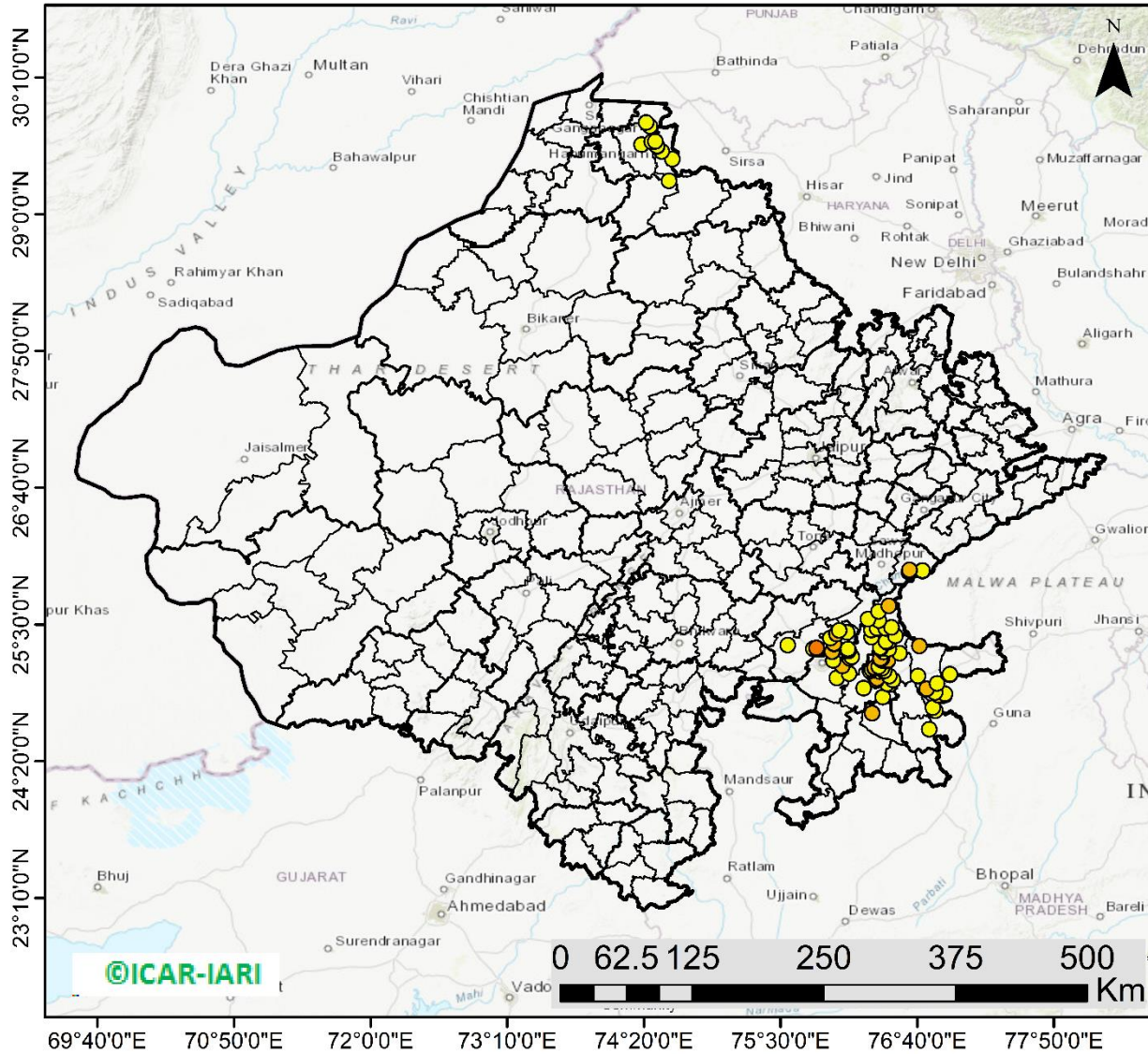


## District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep-16Oct-2024)



# Rajasthan

## RICE RESIDUE BURNING IN RAJASTHAN



**100** burning events detected in Rajasthan on (16th Oct 2024)

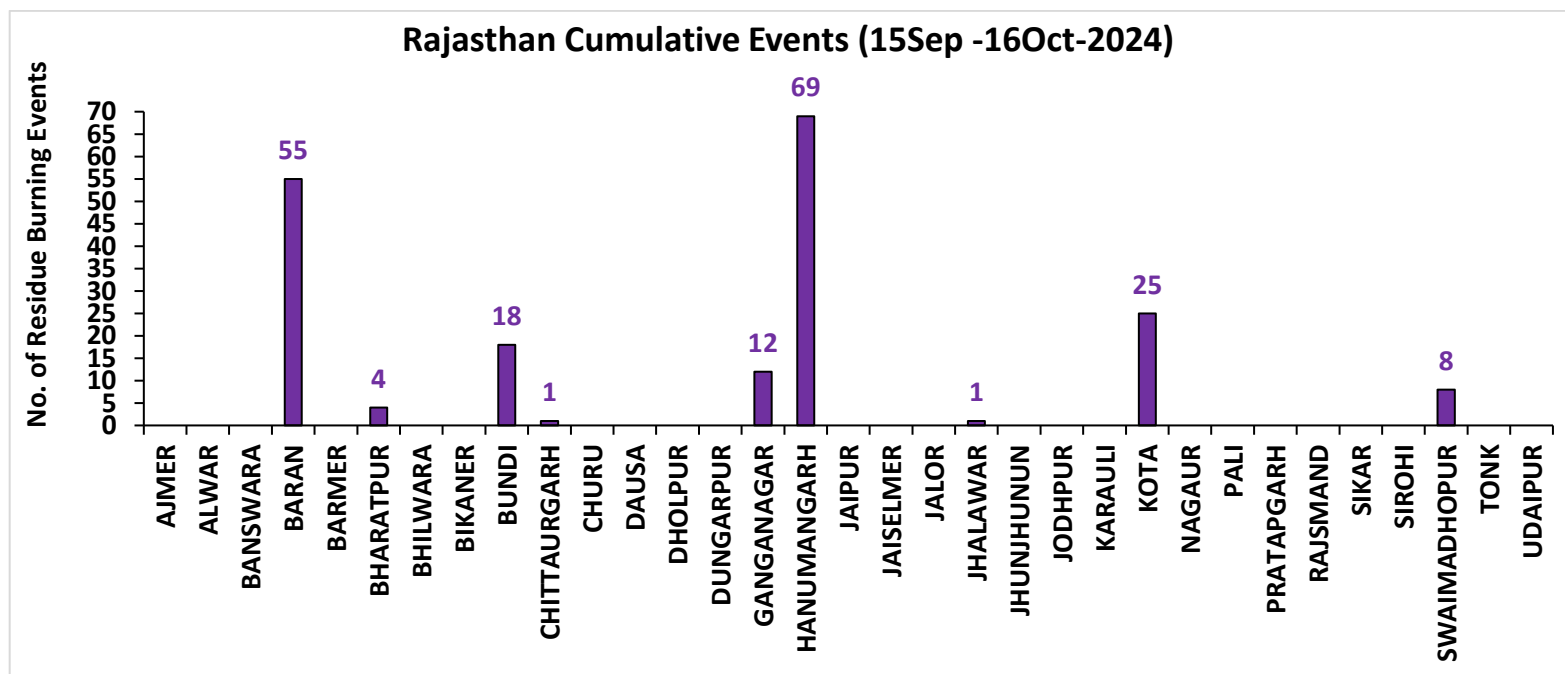
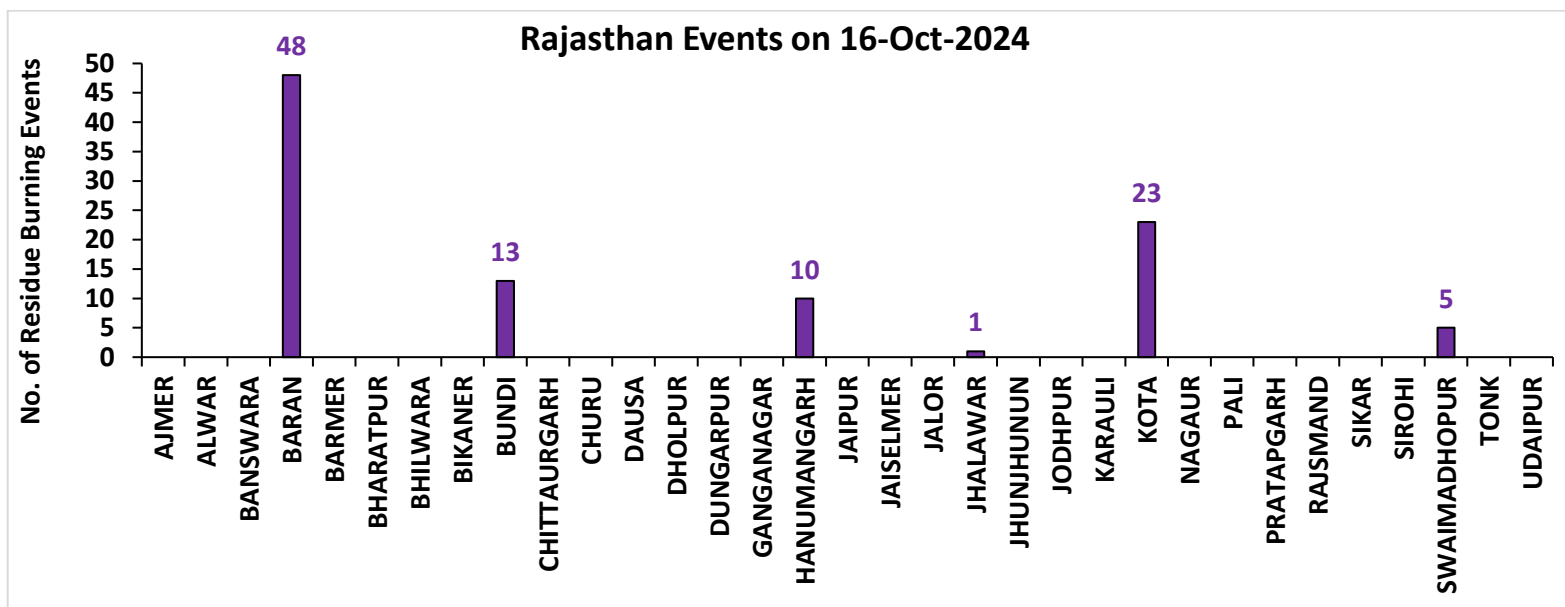
### Fire Intensity (W/m<sup>2</sup>)

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



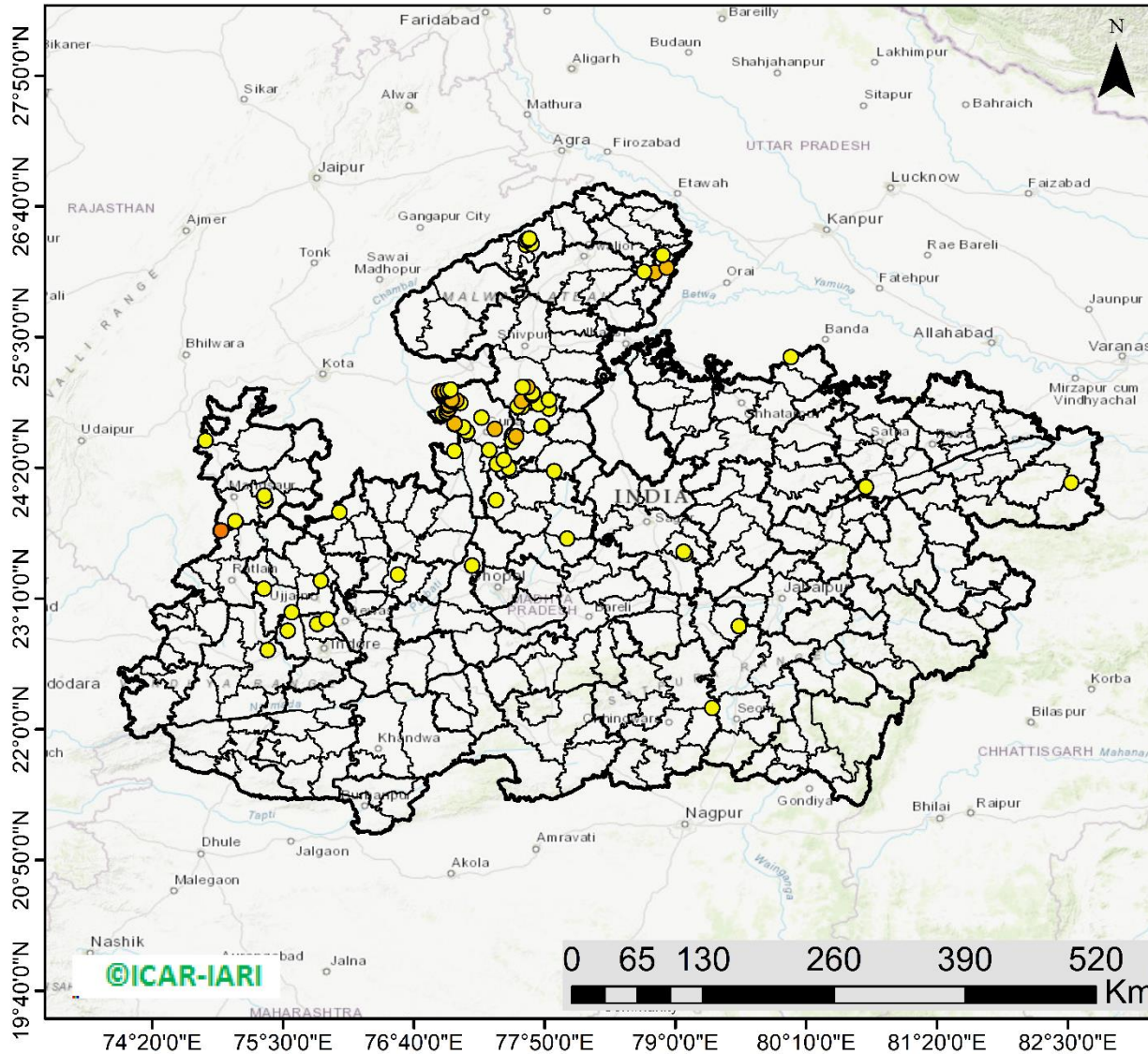
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

## District-wise cumulative number of residues burning events in Rajasthan (15Sep-16Oct-2024)



# Madhya Pradesh

## RICE RESIDUE BURNING IN MADHYA PRADESH



**112** burning events detected in MP on (16th Oct 2024)

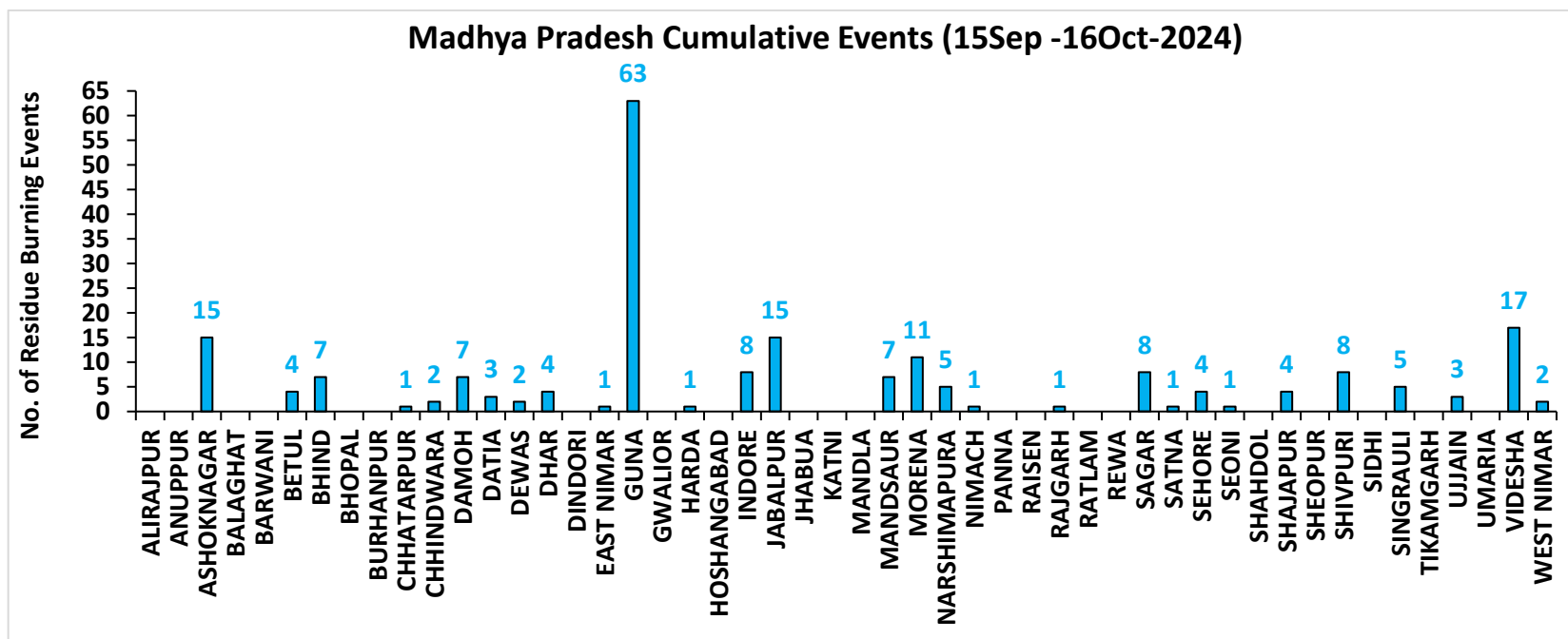
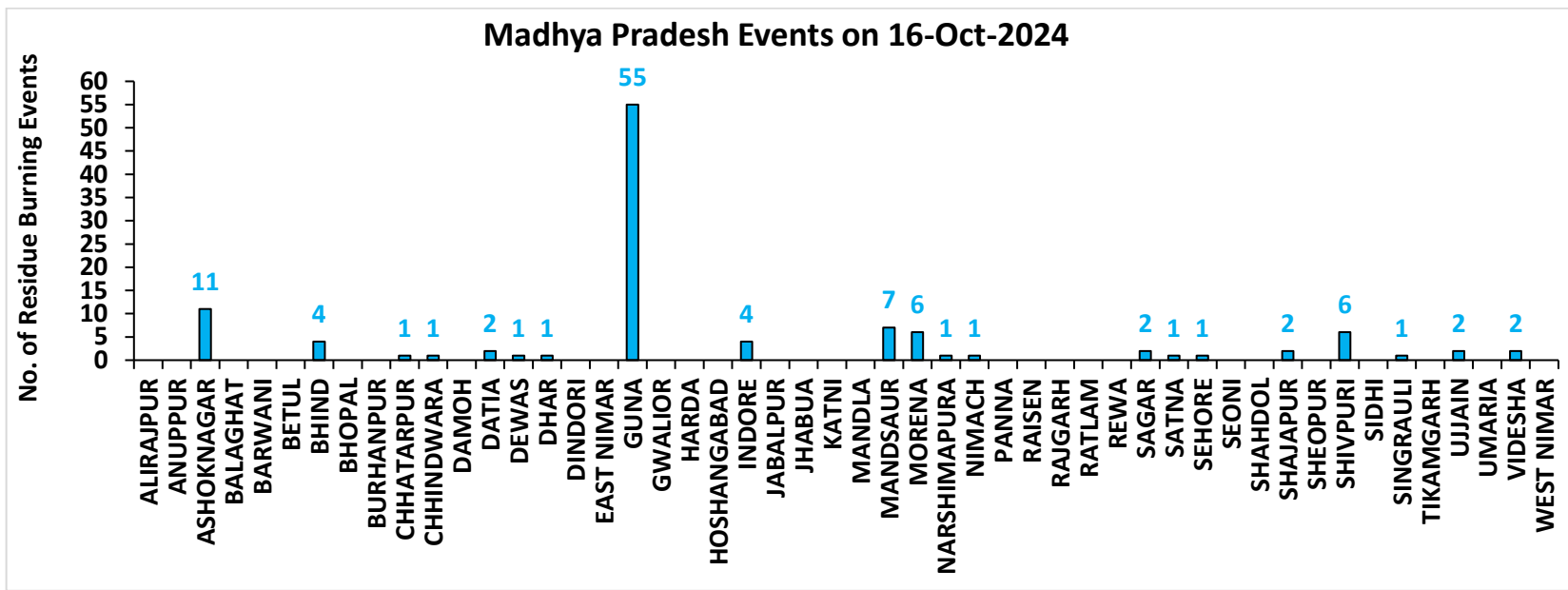
### Fire Intensity (W/m<sup>2</sup>)

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



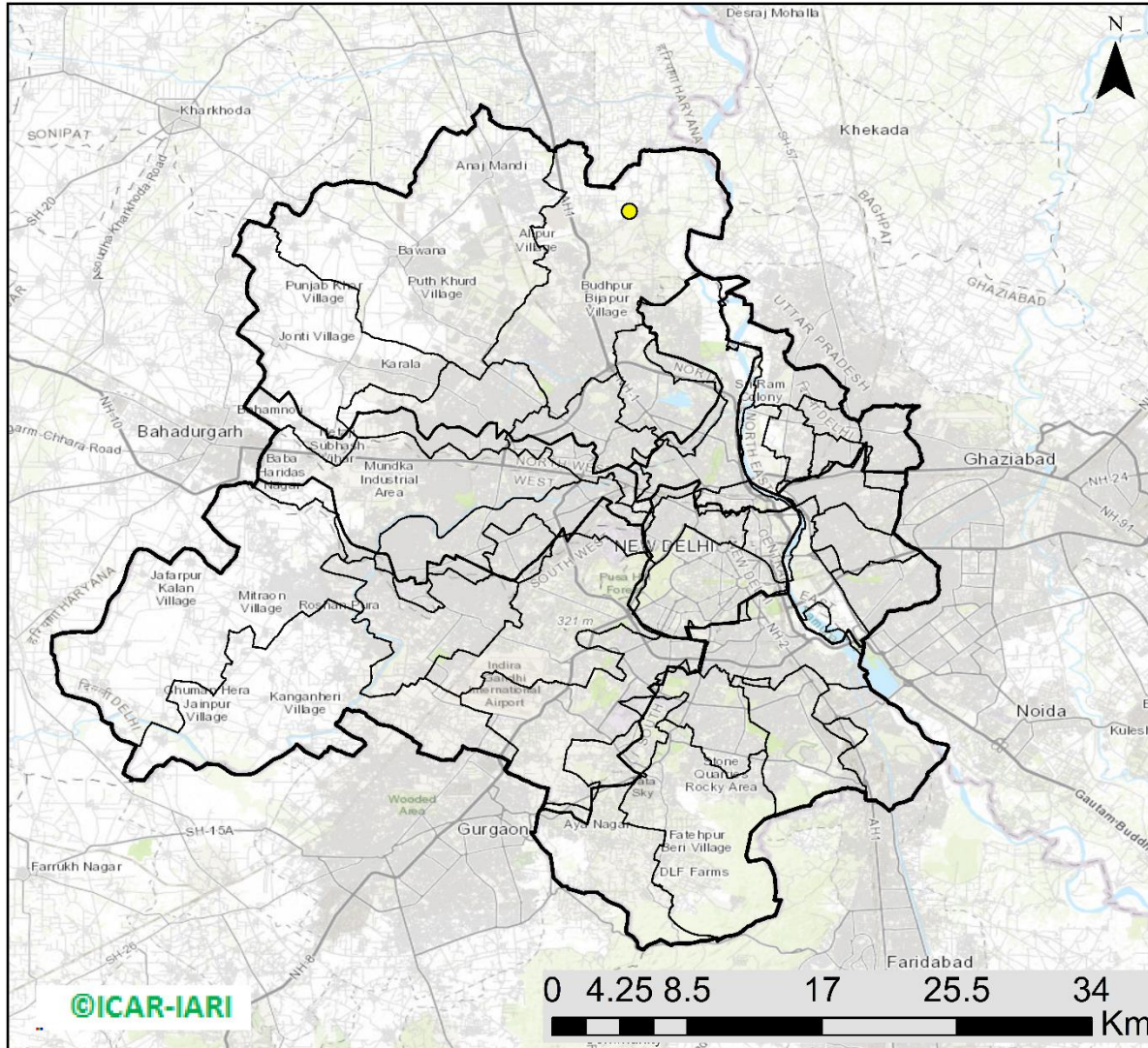
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

## District-wise cumulative number of residues burning events in Madhya Pradesh (15Sep-16Oct-2024)



# Delhi

## RICE RESIDUE BURNING IN DELHI



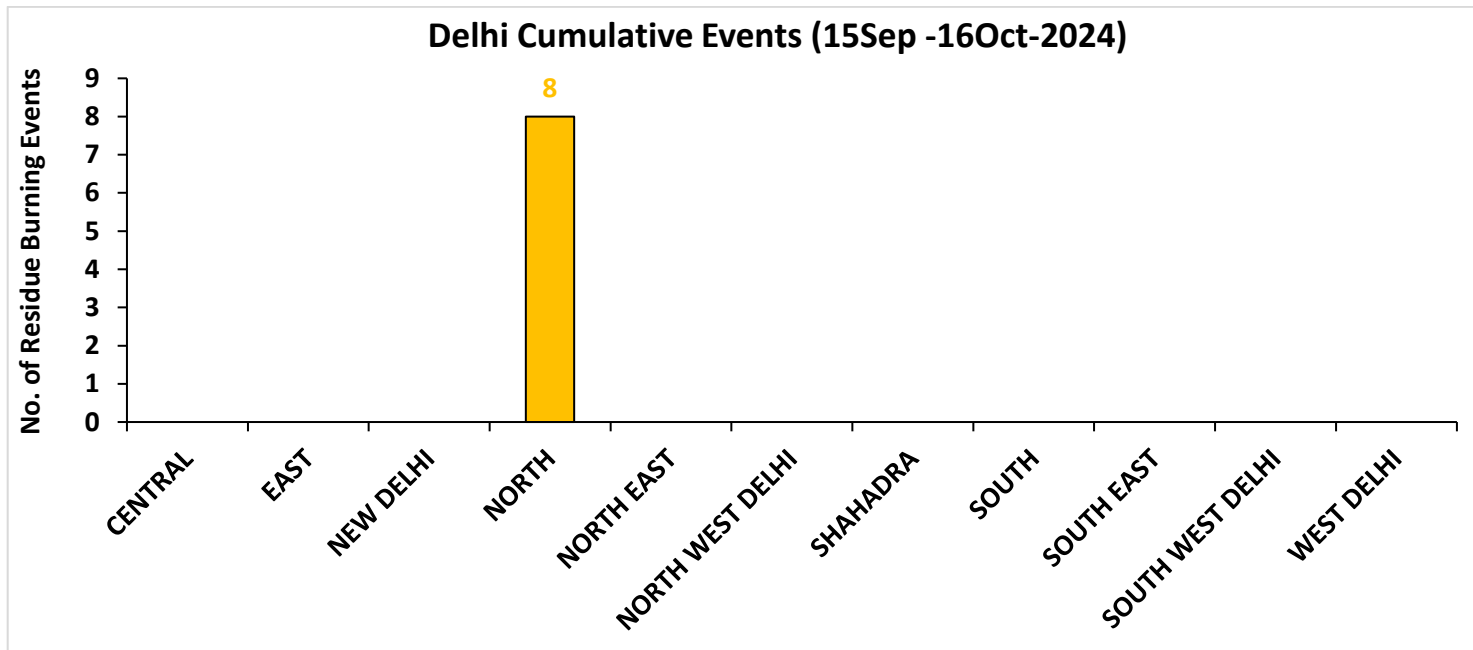
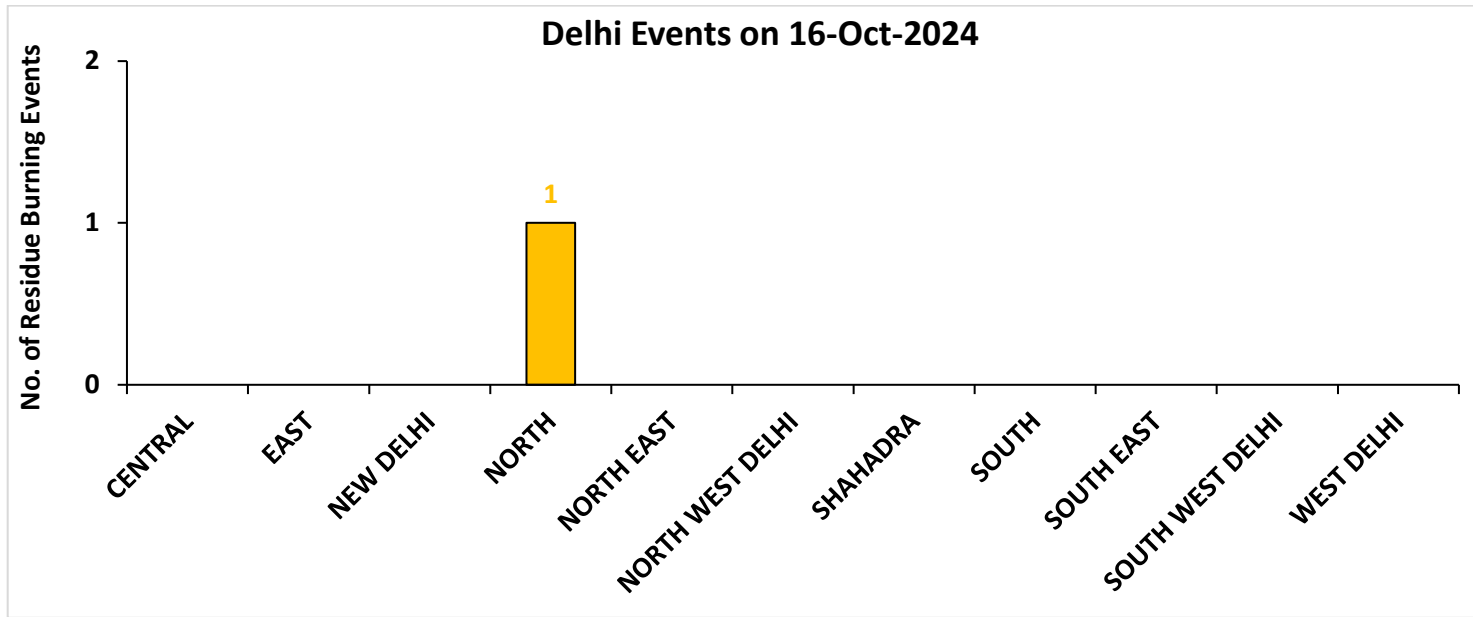
**01** burning events detected in Delhi on (16th Oct 2024)

### Fire Intensity (W/m<sup>2</sup>)

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



District-wise cumulative number of residues burning events in Delhi (15Sep-16Oct-2024)



**District-wise cumulative number of residues burning events detected in 2020, 2021, 2022, 2023 and 2024**  
**(Period: 15 September-16 October)**

**(a) Punjab**

District	15 Sep-16 Oct				
	2020	2021	2022	2023	2024
Amritsar	1781	604	600	644	400
Barnala	18	13	7	7	6
Bathinda	43	8	1	2	4
Faridkot	147	70	8	9	2
Fatehgarh Sahib	102	101	13	24	20
Fazilka	32	29	11	7	7
Firozpur	365	78	66	46	69
Gurdaspur	331	143	70	11	38
Hoshiarpur	31	11	2	2	0
Jalandhar	88	76	48	20	12
Kapurthala	182	93	72	81	56
Ludhiana	135	148	26	24	23
Malerkotla	0	0	0	3	20
Mansa	36	2	7	28	18
Moga	44	39	28	9	6
Muktsar	26	21	1	1	1
Pathankot	0	0	0	0	0
Patiala	470	256	55	145	134
Rupnagar	18	16	0	1	2
Sangrur	118	45	31	78	104
SAS NAGAR (Mohali)	38	27	5	52	26
SBS Nagar	11	9	2	2	3
Tarn Taran	1303	586	391	192	261
<b>Total</b>	<b>5319</b>	<b>2375</b>	<b>1444</b>	<b>1388</b>	<b>1212</b>

**(b) Haryana**

District	15 Sep-16 Oct				
	2020	2021	2022	2023	2024
AMBALA	93	54	19	79	66
BHIWANI	0	0	0	2	0
CHARKHI DADRI	0	0	0	0	0
FARIDABAD	0	1	0	2	25
FATEHABAD	44	49	17	80	32
GURGAON	0	0	0	0	0
HISAR	6	1	2	29	16
JHAJJAR	1	0	0	3	1
JIND	22	30	18	59	47
KAITHAL	136	249	48	51	97
KARNAL	233	343	51	39	56
KURUKSHETRA	175	205	64	67	86
MAHENDRAGARH	0	0	0	0	0
MEWAT	0	0	0	0	0
PALWAL	6	25	0	27	26
PANCHKULA	0	0	0	0	14
PANIPAT	9	15	2	14	24
REWARI	0	0	0	0	0
ROHTAK	0	0	0	4	6
SIRSA	7	4	3	6	14
SONIPAT	9	5	3	42	40
YAMUNANAGAR	41	45	17	42	23
<b>Total</b>	<b>782</b>	<b>1026</b>	<b>244</b>	<b>546</b>	<b>573</b>



**(c) Uttar Pradesh**

District	15 Sep-16 Oct																
	2020	2021	2022	2023	2024	GAUTAMBUDHNAGAR	1	7	0	5	19	MUZAFARNAGAR	2	2	0	0	3
AGRA	1	0	0	0	0	GAZIPUR	0	0	0	0	0	PILHIBHIT	8	82	3	36	15
ALIGARH	25	21	1	63	123	GHAZIABAD	3	2	1	6	7	PRATAPGARH	0	0	0	0	0
ALLAHABAD	0	1	0	0	1	GONDA	0	0	0	0	0	RAIBEARELI	1	0	0	0	0
AMBEDKARNAGAR	0	0	0	0	1	GORAKHPUR	0	0	0	0	0	RAMPUR	19	50	0	14	12
AMETHI	0	1	4	1	0	HAMIRPUR	1	0	0	0	0	SAMBHAL	6	7	4	8	80
AMROHA	1	0	0	2	4	HAPUR	3	1	0	0	8	SANTKABIRNAGAR	0	0	0	0	0
AURAIYA	16	5	4	4	1	HARDOI	6	6	0	4	8	SANTRAVIDASNAGAR	0	0	0	0	0
AZAMGARH	0	0	0	0	0	HATHRAS	0	0	0	2	9	SHAHJAHANPUR	37	174	53	21	33
BADAUN	0	1	0	2	13	JALAUN	0	0	0	0	0	SHAMLI	18	11	2	3	4
BAGHPAT	2	1	0	1	3	JAUNPUR	0	0	0	0	0	SHARANPUR	19	17	0	0	4
BAHRAICH	2	2	4	0	3	JHANSI	8	5	0	3	2	SHRAWASTI	2	0	0	0	0
BALLIA	0	0	0	0	1	KANNAUJ	3	1	0	1	4	SIDDHARTHANAGAR	0	0	0	0	0
BALRAMPUR	0	1	0	0	0	KANPUR	0	7	0	2	1	SITAPUR	9	9	0	2	37
BANDA	0	0	0	0	0	KANPUR DEHAT	4	1	0	3	0	SONBHADRA	0	0	0	0	0
BARABANKI	11	18	0	18	46	KASGANJ	1	2	0	1	1	SULTANPUR	0	0	0	0	0
BAREILLY	10	15	0	10	9	KAUSHAMBI	7	3	0	6	3	UNNAO	4	0	0	2	3
BASTI	2	1	0	0	1	KHERI	32	52	8	3	9	VARANASI	0	0	0	0	0
BIJNOR	4	3	1	5	3	KUSHINAGAR	0	0	0	0	0	<b>Total</b>	<b>341</b>	<b>581</b>	<b>91</b>	<b>326</b>	<b>587</b>
BULANDSAHAR	6	2	2	5	23	LALITPUR	0	1	2	0	0						
CHANDAULI	0	0	0	0	0	LUCKNOW	2	0	0	1	1						
CHITRAKOOT	0	0	0	0	0	MAHARAJGANJ	0	0	0	0	1						
DEORIA	0	0	0	2	0	MAHOBA	1	0	0	0	0						
ETAH	4	6	0	8	5	MAINPURI	5	7	0	6	6						
ETAWAH	2	7	0	11	1	MATHURA	14	27	0	53	48						
FAIZABAD	1	0	0	0	4	MAU	0	0	0	0	0						
FARRUKHABAD	0	0	0	0	0	MEERUT	11	4	0	2	4						
FATEHPUR	14	6	0	6	5	MIRZAPUR	5	5	2	0	2						
FIROZABAD	4	4	0	2	0	MORADABAD	4	3	0	2	16						

**(d) Delhi**

District	15 Sep-16 Oct				
	2020	2021	2022	2023	2024
CENTRAL	0	0	0	0	0
EAST	0	0	0	0	0
NEW DELHI	0	0	0	0	0
NORTH	2	0	2	2	8
NORTH EAST	0	0	0	0	0
NORTH WEST DELHI	1	0	0	0	0
SHAHADRA	0	0	0	0	0
SOUTH	1	0	0	0	0
SOUTH EAST	0	0	0	0	0
SOUTH WEST DELHI	0	0	0	0	0
WEST DELHI	0	0	0	0	0
<b>Total</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>8</b>

**(e) Rajasthan**

District	15 Sep-16 Oct				
	2020	2021	2022	2023	2024
AJMER	0	0	0	0	0
ALWAR	1	0	0	0	0
BANSWARA	0	0	0	0	0
BARAN	81	0	4	93	55
BARMER	2	0	0	0	0
BHARATPUR	0	0	0	2	4
BHILWARA	2	0	0	0	0
BIKANER	1	0	0	0	0
BUNDI	4	0	8	17	18
CHITTAURGARH	0	2	2	5	1
CHURU	0	0	0	0	0
DAUSA	0	0	0	0	0
DHOLPUR	0	0	0	0	0
DUNGARPUR	0	0	0	0	0
GANGANAGAR	2	0	1	9	12
HANUMANGARH	83	24	3	39	69
JAIPUR	1	0	0	0	0
JAISELMER	2	0	0	0	0
JALOR	0	0	0	0	0
JHALAWAR	1	0	0	6	1
JHUNJHUNUN	1	0	0	0	0
JODHPUR	1	0	0	0	0
KARAULI	1	0	0	0	0
KOTA	23	1	3	55	25
NAGAU	0	0	0	0	0
PALI	1	0	0	0	0
PRATAPGARH	0	0	0	0	0
RAJSMAND	0	0	0	0	0
SIKAR	0	0	0	0	0
SIROHI	1	0	0	0	0
SWAIMADHOPUR	5	0	0	15	8
TONK	1	0	0	0	0
UDAIPUR	0	0	0	0	0
<b>Total</b>	<b>214</b>	<b>27</b>	<b>21</b>	<b>241</b>	<b>193</b>

**(f) Madhya Pradesh**

District	15 Sep-16 Oct										
	2020	2021	2022	2023	2024	PANNA	2	0	0	0	0
ALIRAJPUR	0	0	0	0	0	RAISEN	11	1	0	2	0
ANUPPUR	0	0	0	0	0	RAJGARH	7	1	2	7	1
ASHOKNAGAR	10	0	0	18	15	RATLAM	0	0	0	1	0
BALAGHAT	0	0	0	0	0	REWA	3	0	0	0	0
BARWANI	0	0	0	0	0	SAGAR	13	6	1	8	8
BETUL	0	0	0	2	4	SATNA	3	6	0	1	1
BHIND	3	1	0	7	7	SEHORE	5	3	1	10	4
BHOPAL	6	5	1	7	0	SEONI	9	5	0	3	1
BURHANPUR	0	0	0	0	0	SHAHDOL	0	0	0	0	0
CHHATARPUR	4	0	0	3	1	SHAJAPUR	5	0	0	7	4
CHHINDWARA	1	3	0	2	2	SHEOPUR	11	0	0	14	0
DAMOH	16	4	0	10	7	SHIVPURI	5	0	6	7	8
DATIA	37	8	0	37	3	SIDHI	0	0	0	0	0
DEWAS	3	0	0	6	2	SINGRAULI	0	0	0	0	5
DHAR	20	0	0	22	4	TIKAMGARH	1	0	0	2	0
DINDORI	0	0	0	0	0	UJJAIN	5	0	0	12	3
EAST NIMAR	2	1	2	1	1	UMARIA	0	0	0	0	0
GUNA	15	1	1	87	63	VIDESHA	53	8	2	21	17
GWALIOR	23	0	1	7	0	WEST NIMAR	2	0	0	2	2
HARDA	8	9	0	13	1	<b>Total</b>	<b>321</b>	<b>83</b>	<b>20</b>	<b>375</b>	<b>211</b>
HOSHANGABAD	9	8	0	12	0						
INDORE	2	0	0	12	8						
JABALPUR	7	4	1	11	15						
JHABUA	0	0	0	0	0						
KATNI	0	0	0	0	0						
MANDLA	0	0	0	0	0						
MANDSAUR	3	0	0	1	7						
MORENA	14	5	0	13	11						
NARSHIMAPURA	3	4	2	7	5						
NIMACH	0	0	0	0	1						

**State-wise and date-wise number of paddy residue burning events detected in 2020 ,2021 ,2022, 2023 and 2024**  
**(Period: 15 September-16 October)**

**Number of Paddy Residue Burning Events Detected**

Date	Punjab					Haryana					Uttar Pradesh				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
15-Sep	5	0	14	0	11	2	0	0	1	1	1	0	0	0	0
16-Sep	0	2	0	6	0	1	0	0	1	0	0	0	0	2	0
17-Sep	5	0	1	0	5	3	0	0	0	1	0	0	0	0	1
18-Sep	17	9	7	0	2	0	0	1	0	0	0	1	0	0	0
19-Sep	30	5	18	0	0	2	0	0	1	0	0	1	0	0	0
20-Sep	67	8	10	0	13	6	0	0	2	1	2	0	0	0	0
21-Sep	54	0	56	1	21	2	0	0	2	13	1	0	0	1	2
22-Sep	34	0	30	0	11	1	0	0	2	18	1	0	0	0	0
23-Sep	49	0	3	1	6	0	0	0	3	12	1	0	0	0	0
24-Sep	78	5	0	0	12	0	0	0	0	6	1	1	0	1	0
25-Sep	184	11	0	0	12	11	0	0	1	18	5	0	0	1	0
26-Sep	190	19	0	3	5	5	0	0	2	5	8	0	0	0	0
27-Sep	78	37	0	21	0	8	0	0	9	5	4	1	0	0	3
28-Sep	55	28	0	33	0	6	1	0	8	0	1	6	0	4	0
29-Sep	63	64	0	68	21	9	4	0	17	0	6	10	0	6	0
30-Sep	116	27	8	81	10	22	2	0	26	1	13	13	10	18	0
01-Oct	165	13	45	123	26	15	4	1	21	3	7	13	3	17	0
02-Oct	141	0	83	119	16	30	2	7	24	20	12	0	36	7	9
03-Oct	110	9	75	105	8	8	6	8	17	6	4	3	29	8	7
04-Oct	162	23	65	95	9	29	2	7	29	9	8	0	2	9	0
05-Oct	161	18	130	98	5	17	3	24	24	8	14	2	0	14	1
06-Oct	171	42	85	91	3	30	0	26	19	23	12	1	0	18	17
07-Oct	197	72	62	32	18	32	11	6	13	14	41	13	0	5	11
08-Oct	95	108	19	92	20	29	27	0	55	13	25	11	0	27	16
09-Oct	121	114	3	58	33	20	39	1	14	10	15	20	0	13	10
10-Oct	232	150	4	10	123	33	95	2	28	38	9	54	0	34	56
11-Oct	377	64	45	26	143	90	51	0	21	55	23	28	0	50	87
12-Oct	388	97	104	13	177	69	51	4	5	98	46	23	0	5	102

<b>13-Oct</b>	266	132	120	154	162	47	91	15	29	90	36	42	0	19	76
<b>14-Oct</b>	605	229	82	89	97	69	98	30	41	49	9	68	5	18	52
<b>15-Oct</b>	449	660	169	69	144	106	363	36	127	42	15	149	0	35	78
<b>16-Oct</b>	654	429	206	0	99	80	176	76	4	14	21	121	6	14	59
<b>Total</b>	<b>5319</b>	<b>2375</b>	<b>1444</b>	<b>1388</b>	<b>1212</b>	<b>782</b>	<b>1026</b>	<b>244</b>	<b>546</b>	<b>573</b>	<b>341</b>	<b>581</b>	<b>91</b>	<b>326</b>	<b>587</b>

### Number of Paddy Residue Burning Events Detected

Date	Delhi					Rajasthan					Madhya Pradesh				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
15-Sep	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0
16-Sep	0	0	0	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	0	0	1
18-Sep	0	0	0	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	0	0	1	0
20-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
21-Sep	0	0	0	0	0	1	0	1	0	0	2	0	0	0	1
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23-Sep	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
24-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Sep	0	0	0	0	0	1	0	0	0	3	0	0	0	1	0
26-Sep	0	0	0	1	0	1	0	0	0	0	2	0	0	0	2
27-Sep	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
28-Sep	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0
29-Sep	0	0	0	0	0	3	0	0	6	0	0	4	0	5	0
30-Sep	1	0	0	0	0	1	0	0	4	2	5	0	0	11	0
01-Oct	0	0	0	0	0	4	1	1	4	1	13	0	1	8	3
02-Oct	1	0	0	0	0	7	0	3	4	3	12	0	1	1	0
03-Oct	0	0	0	0	0	9	0	2	5	0	5	1	5	5	2
04-Oct	0	0	0	0	0	15	0	0	22	0	4	2	0	12	0
05-Oct	0	0	2	0	0	14	0	1	11	2	13	1	0	18	2
06-Oct	1	0	0	0	0	16	0	0	9	1	37	1	0	7	12
07-Oct	0	0	0	0	0	14	1	1	7	4	31	1	0	9	17
08-Oct	0	0	0	0	0	11	0	0	9	1	17	2	0	18	7
09-Oct	0	0	0	0	0	12	0	0	17	1	15	4	0	24	2

10-Oct	0	0	0	0	3	14	1	0	26	3	18	10	0	52	1
11-Oct	0	0	0	1	0	21	7	1	21	6	32	2	0	24	17
12-Oct	0	0	0	0	2	24	1	2	1	13	44	1	1	1	5
13-Oct	0	0	0	0	1	7	5	2	28	10	21	2	7	32	5
14-Oct	0	0	0	0	1	16	1	1	15	20	15	11	1	26	7
15-Oct	0	0	0	0	0	9	8	2	34	23	8	27	2	66	11
16-Oct	1	0	0	0	1	12	2	4	18	100	23	13	2	51	112
<b>Total</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>8</b>	<b>214</b>	<b>27</b>	<b>21</b>	<b>241</b>	<b>193</b>	<b>321</b>	<b>83</b>	<b>20</b>	<b>375</b>	<b>211</b>

### Details of residue burning events in Punjab on 16-Oct-2024

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMRITSAR	AJNALA	JPSS-2	31.80228	74.73471	13:29:26	D	6.40
2	AMRITSAR	AJNALA	JPSS-2	31.84008	74.93418	13:29:26	D	5.40
3	AMRITSAR	ATTARI	JPSS-1	31.57161	74.61445	12:37:30	D	2.40
4	AMRITSAR	ATTARI	JPSS-1	31.57309	74.61272	12:37:30	D	2.70
5	AMRITSAR	CHOGAWAN	S-NPP	31.65847	74.54965	13:52:53	D	3.40
6	AMRITSAR	CHOGAWAN	JPSS-2	31.66973	74.54271	13:29:26	D	3.00
7	AMRITSAR	CHOGAWAN	S-NPP	31.76947	74.66165	13:52:53	D	4.20
8	AMRITSAR	CHOGAWAN	S-NPP	31.78155	74.65989	13:52:53	D	2.20
9	AMRITSAR	CHOGAWAN	JPSS-2	31.83585	74.62054	13:29:26	D	3.00
10	AMRITSAR	CHOGAWAN	JPSS-2	31.83711	74.62860	13:29:26	D	3.30
11	AMRITSAR	HARSHA CHHINA	S-NPP	31.80685	74.89684	13:52:53	D	1.50
12	AMRITSAR	HARSHA CHHINA	JPSS-1	31.80861	74.70876	12:37:30	D	6.60
13	AMRITSAR	HARSHA CHHINA	JPSS-1	31.81199	74.70926	12:37:30	D	5.40
14	AMRITSAR	JANDIALA GURU	S-NPP	31.54483	75.05598	13:52:53	D	3.00
15	AMRITSAR	JANDIALA GURU	JPSS-1	31.61146	75.04618	14:17:04	D	2.80
16	AMRITSAR	JANDIALA GURU	JPSS-1	31.61400	75.04438	14:17:04	D	5.00
17	AMRITSAR	JANDIALA GURU	JPSS-1	31.61746	75.04579	14:17:04	D	2.80
18	AMRITSAR	MAJITHA	JPSS-2	31.74169	75.02524	13:29:26	D	3.10
19	AMRITSAR	MAJITHA	S-NPP	31.74982	74.93749	13:52:53	D	1.30
20	AMRITSAR	MAJITHA	S-NPP	31.77536	74.95291	13:52:53	D	6.00
21	AMRITSAR	RAYYA	S-NPP	31.57379	75.23234	13:52:53	D	3.70

22	AMRITSAR	RAYYA	S-NPP	31.57622	75.23095	13:52:53	D	2.90
23	AMRITSAR	RAYYA	JPSS-2	31.67800	75.29909	13:29:26	D	2.80
24	AMRITSAR	TARSIKKA	JPSS-2	31.68637	75.06175	13:29:26	D	2.40
25	AMRITSAR	TARSIKKA	JPSS-2	31.69069	75.22224	13:29:26	D	2.40
26	FAZILKA	KHUIAN SARWAR	JPSS-2	30.30300	73.94986	13:29:26	D	4.10
27	FIROZPUR	FIROZPUR	JPSS-2	30.82430	74.54684	13:29:26	D	13.90
28	FIROZPUR	FIROZPUR	JPSS-1	30.93719	74.52222	14:17:04	D	5.10
29	FIROZPUR	FIROZPUR	JPSS-1	30.93779	74.53158	14:17:04	D	10.50
30	FIROZPUR	FIROZPUR	S-NPP	30.93886	74.51781	13:52:53	D	6.70
31	FIROZPUR	FIROZPUR	JPSS-1	30.95941	74.50650	14:17:04	D	3.30
32	FIROZPUR	FIROZPUR	S-NPP	30.96000	74.50654	13:52:53	D	5.00
33	FIROZPUR	FIROZPUR	JPSS-1	30.96011	74.50664	14:17:04	D	2.80
34	FIROZPUR	FIROZPUR	S-NPP	30.97376	74.52235	13:52:53	D	3.10
35	FIROZPUR	FIROZPUR	S-NPP	30.97578	74.52428	13:52:53	D	4.80
36	FIROZPUR	GURUHAR SAHAI	JPSS-2	30.70074	74.22653	13:29:26	D	8.20
37	FIROZPUR	GURUHAR SAHAI	JPSS-1	30.74833	74.32642	14:17:04	D	2.80
38	FIROZPUR	MAMDOT	JPSS-1	30.78022	74.34413	14:17:04	D	3.00
39	FIROZPUR	MAMDOT	S-NPP	30.80269	74.54563	13:52:53	D	15.30
40	FIROZPUR	MAMDOT	JPSS-1	30.82747	74.36321	14:17:04	D	5.70
41	FIROZPUR	MAMDOT	JPSS-1	30.82778	74.36775	14:17:04	D	6.60
42	FIROZPUR	MAMDOT	JPSS-1	30.89637	74.42752	14:17:04	D	2.90
43	GURDASPUR	BATALA	JPSS-2	31.73678	75.25814	13:29:26	D	3.70
44	GURDASPUR	BATALA	JPSS-2	31.73683	75.19189	13:29:26	D	3.20
45	GURDASPUR	BATALA	S-NPP	31.77776	75.14016	13:52:53	D	3.20
46	GURDASPUR	FATEHGARH CHURIAN	JPSS-1	31.84754	75.10740	12:37:30	D	5.60
47	GURDASPUR	FATEHGARH CHURIAN	S-NPP	31.90781	75.04318	13:52:53	D	2.50
48	JALANDHAR	LOHIAN	JPSS-1	31.12540	75.29201	12:37:30	D	4.40
49	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.23334	75.09750	13:52:53	D	5.80
50	KAPURTHALA	SULTANPUR LODHI	JPSS-2	31.23520	75.09692	13:29:26	D	7.60
51	LUDHIANA	RAIKOT	S-NPP	30.58356	75.52290	13:52:53	D	2.80
52	MOGA	MOGA 1	JPSS-2	30.74195	75.25878	13:29:26	D	2.90
53	PATIALA	PATRAN	JPSS-1	29.87242	76.09641	14:17:04	D	7.00
54	PATIALA	SANAUR	JPSS-2	30.26722	76.38499	02:19:28	N	0.80

55	SANGRUR	ANDANA	JPSS-2	29.77570	75.93594	13:29:26	D	3.70
56	SANGRUR	ANDANA	JPSS-2	29.78162	76.01996	13:29:26	D	3.90
57	SANGRUR	ANDANA	JPSS-2	29.79267	76.02589	13:29:26	D	2.30
58	SANGRUR	ANDANA	JPSS-2	29.79741	76.05742	13:29:26	D	3.90
59	SANGRUR	ANDANA	JPSS-2	29.80070	76.05677	13:29:26	D	3.90
60	SANGRUR	ANDANA	JPSS-2	29.88296	75.99185	13:29:26	D	4.90
61	SANGRUR	DIRBA	S-NPP	29.99905	75.93276	13:52:53	D	2.40
62	SANGRUR	LEHRA GAGA	JPSS-1	29.81124	75.75349	12:37:30	D	3.60
63	SANGRUR	LEHRA GAGA	JPSS-1	29.83034	75.85198	12:37:30	D	4.20
64	SANGRUR	SHER PUR	S-NPP	30.49318	75.68153	13:52:53	D	2.70
65	TARN TARAN	BHIKHIWIND	JPSS-1	31.36506	74.73501	14:17:04	D	6.30
66	TARN TARAN	CHOHLA SAHIB	S-NPP	31.33575	75.09727	13:52:53	D	2.10
67	TARN TARAN	CHOHLA SAHIB	S-NPP	31.34216	75.11797	13:52:53	D	8.50
68	TARN TARAN	CHOHLA SAHIB	JPSS-1	31.37809	75.05460	14:17:04	D	4.60
69	TARN TARAN	GANDIWIND TATLA	S-NPP	31.44094	74.70322	13:52:53	D	1.70
70	TARN TARAN	GANDIWIND TATLA	JPSS-1	31.45342	74.75101	14:17:04	D	6.50
71	TARN TARAN	GANDIWIND TATLA	JPSS-2	31.45362	74.72916	13:29:26	D	2.70
72	TARN TARAN	GANDIWIND TATLA	JPSS-1	31.45961	74.75551	14:17:04	D	6.80
73	TARN TARAN	GANDIWIND TATLA	S-NPP	31.46317	74.75804	13:52:53	D	7.70
74	TARN TARAN	GANDIWIND TATLA	JPSS-2	31.48342	74.68131	13:29:26	D	2.40
75	TARN TARAN	GANDIWIND TATLA	JPSS-2	31.51834	74.66234	13:29:26	D	4.90
76	TARN TARAN	GANDIWIND TATLA	JPSS-2	31.56302	74.75232	13:29:26	D	3.10
77	TARN TARAN	KHADUR SAHIB	S-NPP	31.38383	75.05247	13:52:53	D	4.70
78	TARN TARAN	KHADUR SAHIB	S-NPP	31.40657	75.07079	13:52:53	D	9.00
79	TARN TARAN	KHADUR SAHIB	JPSS-1	31.40936	75.13841	14:17:04	D	4.50
80	TARN TARAN	KHADUR SAHIB	JPSS-1	31.41320	75.13986	14:17:04	D	4.10
81	TARN TARAN	KHADUR SAHIB	JPSS-2	31.42493	75.04912	13:29:26	D	3.00
82	TARN TARAN	KHADUR SAHIB	JPSS-1	31.42647	75.15974	14:17:04	D	3.90
83	TARN TARAN	KHADUR SAHIB	JPSS-1	31.45091	75.12511	14:17:04	D	2.70
84	TARN TARAN	KHADUR SAHIB	JPSS-2	31.47471	75.19174	13:29:26	D	2.40
85	TARN TARAN	KHADUR SAHIB	JPSS-2	31.49861	75.01740	13:29:26	D	2.20
86	TARN TARAN	NAUSHERA PANNUAN	S-NPP	31.33780	74.96925	13:52:53	D	2.40
87	TARN TARAN	NAUSHERA PANNUAN	S-NPP	31.33876	74.97266	13:52:53	D	3.80



88	TARN TARAN	TARN TARAN	JPSS-2	31.35023	74.80883	13:29:26	D	4.80
89	TARN TARAN	TARN TARAN	S-NPP	31.40890	74.82414	13:52:53	D	1.80
90	TARN TARAN	TARN TARAN	S-NPP	31.42860	74.77969	13:52:53	D	3.20
91	TARN TARAN	TARN TARAN	JPSS-2	31.43039	74.77554	13:29:26	D	3.80
92	TARN TARAN	TARN TARAN	JPSS-1	31.44377	74.89094	14:17:04	D	4.40
93	TARN TARAN	TARN TARAN	S-NPP	31.44899	74.97504	13:52:53	D	1.70
94	TARN TARAN	TARN TARAN	JPSS-2	31.47911	75.00085	13:29:26	D	7.50
95	TARN TARAN	TARN TARAN	JPSS-2	31.48244	74.91332	13:29:26	D	2.10
96	TARN TARAN	TARN TARAN	S-NPP	31.48975	75.00775	13:52:53	D	9.10
97	TARN TARAN	TARN TARAN	S-NPP	31.51107	75.05208	13:52:53	D	5.00
98	TARN TARAN	VALTOHA	S-NPP	31.14431	74.54916	13:52:53	D	5.40
99	TARN TARAN	VALTOHA	JPSS-2	31.18370	74.57489	13:29:26	D	1.80

### Details of residue burning events in Haryana on 16-Oct-2024

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m <sup>2</sup> )
1	FARIDABAD	BALLABGARH	JPSS-2	28.28212	77.47894	13:29:26	D	2.10
2	FARIDABAD	FARIDABAD	JPSS-1	28.34033	77.21709	01:27:30	N	0.80
3	FATEHABAD	FATEHABAD	S-NPP	29.47237	75.49045	13:52:53	D	5.80
4	HISAR	AGROHA	S-NPP	29.36604	75.60594	13:52:53	D	9.00
5	HISAR	HISAR-I	JPSS-2	29.11953	75.78131	02:19:28	N	0.90
6	KAITHAL	GUHLA	S-NPP	29.98465	76.21841	13:52:53	D	2.60
7	KAITHAL	SIWAN	JPSS-2	29.94459	76.39231	02:19:28	N	0.70
8	KAITHAL	SIWAN	S-NPP	29.94802	76.38953	02:42:53	N	0.60
9	KARNAL	ASSANDH	JPSS-2	29.44927	76.53026	13:29:26	D	1.90
10	KARNAL	CHIRAO	JPSS-2	29.64755	76.95609	13:29:26	D	2.00
11	KARNAL	GHARAUNDA	JPSS-2	29.60740	77.00922	13:29:26	D	2.50
12	PALWAL	PALWAL	S-NPP	28.11470	77.34910	13:52:53	D	2.50
13	PALWAL	PALWAL	JPSS-2	28.15965	77.43066	13:29:26	D	5.00
14	SONIPAT	MUNDLANA	JPSS-2	29.18560	76.72607	13:29:26	D	3.20

### Details of residue burning events in Uttar Pradesh on 16-Oct-2024

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	ALIGARH	ATRAULI	S-NPP	27.85337	78.45645	13:52:53	D	3.50
2	ALIGARH	ATRAULI	JPSS-1	27.98561	78.26334	12:37:30	D	2.30
3	ALIGARH	GABHANA	S-NPP	28.06986	77.85862	02:42:53	N	0.40
4	ALIGARH	KHAIR	S-NPP	27.96437	77.69936	13:52:53	D	5.60
5	ALIGARH	KHAIR	JPSS-1	27.97832	77.57858	12:37:30	D	3.00
6	ALIGARH	KHAIR	S-NPP	28.02279	77.54075	13:52:53	D	3.90
7	ALIGARH	KOL	JPSS-2	27.87128	78.16875	13:29:26	D	4.30
8	ALIGARH	KOL	JPSS-2	27.87233	78.16912	13:29:26	D	3.80
9	ALIGARH	KOL	JPSS-1	27.95092	77.99796	12:37:30	D	3.10
10	ALLAHABAD	PHULPUR	JPSS-1	25.48900	81.96634	12:37:30	D	15.50
11	AMBEDKARNAGAR	JALALPUR	JPSS-2	26.35174	82.67883	13:29:26	D	3.20
12	BADAUN	BILSI	JPSS-2	28.09967	78.97866	13:29:26	D	2.50
13	BARABANKI	FATEHPUR	JPSS-1	27.21022	81.21113	12:37:30	D	9.30
14	BARABANKI	FATEHPUR	S-NPP	27.22705	81.33829	13:52:53	D	4.10
15	BARABANKI	FATEHPUR	S-NPP	27.27070	81.13071	13:52:53	D	3.00
16	BARABANKI	NAWABGANJ	AQUA	26.95200	81.14300	13:59:01	D	6.70
17	BARABANKI	RAMNAGAR	JPSS-2	27.12315	81.31926	13:29:26	D	7.30
18	BAREILLY	AONLA	S-NPP	28.28661	79.25077	02:42:53	N	0.70
19	BAREILLY	MIRGANJ	JPSS-2	28.65917	79.24014	02:19:28	N	1.70
20	BASTI	HARRAIYA	JPSS-1	26.72977	82.63583	12:37:30	D	4.30
21	ETAH	ETAH	JPSS-2	27.59135	78.57223	13:29:26	D	3.70
22	ETAWAH	BHARTHNA	JPSS-2	26.91721	79.32627	13:29:26	D	4.20
23	FATEHPUR	FATEHPUR	JPSS-2	25.84772	80.94137	13:29:26	D	3.90
24	FATEHPUR	FATEHPUR	JPSS-1	25.92893	80.92121	12:37:30	D	4.50
25	FATEHPUR	KHAGA	JPSS-2	25.59945	81.20369	13:29:26	D	5.10
26	GAUTAMBUDHNAGAR	GAUTAMBUDHNAGAR	S-NPP	28.31813	77.58804	13:52:53	D	6.80
27	GAUTAMBUDHNAGAR	JEVAR	S-NPP	28.13519	77.54810	02:42:53	N	0.40
28	HAPUR	HAPUR	JPSS-1	28.66953	77.60438	03:07:04	N	3.90
29	HAPUR	HAPUR	JPSS-1	28.67047	77.60526	03:07:04	N	4.60
30	HARDOI	SANDILA	JPSS-2	27.27709	80.41216	02:19:28	N	0.80

31	JHANSI	GARAUTHA	AQUA	25.63100	79.19400	13:59:01	D	10.70
32	JHANSI	GARAUTHA	AQUA	25.63300	79.20700	13:59:01	D	19.00
33	KANNAUJ	CHHIBRAMAU	JPSS-2	26.95831	79.44184	13:29:26	D	5.20
34	KANNAUJ	CHHIBRAMAU	JPSS-2	26.96117	79.44019	13:29:26	D	3.30
35	KANNAUJ	CHHIBRAMAU	JPSS-1	27.00005	79.42838	12:37:30	D	1.80
36	KANPUR	GHATAMPUR	JPSS-2	26.18406	80.45265	13:29:26	D	3.00
37	KAUSHAMBI	SIRATHU	JPSS-2	25.60007	81.20877	13:29:26	D	5.10
38	KHERI	MOHMADI	S-NPP	27.93175	80.08810	13:52:53	D	1.90
39	KHERI	MOHMADI	JPSS-2	27.93551	80.09686	13:29:26	D	2.80
40	MATHURA	CHHATA	S-NPP	27.87162	77.46572	13:52:53	D	7.30
41	MATHURA	MATHURA	JPSS-1	27.46965	77.51732	12:37:30	D	3.20
42	PILHIBHIT	PURANPUR	JPSS-1	28.62856	80.01513	01:27:30	N	0.90
43	SAMBHAL	SAMBHAL	JPSS-1	28.68274	78.50674	12:37:30	D	2.00
44	SHAHJAHANPUR	JALALABAD	JPSS-2	27.69643	79.68130	13:29:26	D	2.70
45	SHAHJAHANPUR	PUWANYA	JPSS-1	27.94182	80.02290	01:27:30	N	1.00
46	SHAHJAHANPUR	PUWANYA	JPSS-2	28.28699	80.08955	02:19:28	N	2.70
47	SHAHJAHANPUR	TILHAR	JPSS-2	27.99559	79.85493	02:19:28	N	1.00
48	SHAHJAHANPUR	TILHAR	JPSS-2	27.99601	79.85437	02:19:28	N	0.50
49	SITAPUR	MAHMUDABAD	JPSS-1	27.24075	81.19758	12:37:30	D	2.50
50	SITAPUR	MAHMUDABAD	JPSS-2	27.25520	81.19266	13:29:26	D	4.30
51	SITAPUR	MAHMUDABAD	JPSS-2	27.25584	81.19803	13:29:26	D	4.30
52	SITAPUR	MAHMUDABAD	S-NPP	27.25877	81.20070	13:52:53	D	2.70
53	SITAPUR	MAHMUDABAD	JPSS-2	27.26220	81.15338	13:29:26	D	6.00
54	SITAPUR	MAHMUDABAD	JPSS-1	27.27032	81.15660	12:37:30	D	4.00
55	SITAPUR	MAHMUDABAD	JPSS-2	27.27640	81.20595	13:29:26	D	2.00
56	SITAPUR	MAHMUDABAD	JPSS-1	27.31372	81.13720	12:37:30	D	3.00
57	SITAPUR	MAHMUDABAD	AQUA	27.27400	81.12900	13:59:01	D	13.60
58	SITAPUR	MISRIK	JPSS-2	27.41972	80.58624	13:29:26	D	7.60
59	UNNAO	SAFIPUR	JPSS-2	26.95175	80.15520	13:29:26	D	7.80

### Details of residue burning events in Rajasthan on 16-Oct-2024

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m <sup>2</sup> )
1	BARAN	ANTA	JPSS-2	25.02138	76.31863	13:29:26	D	2.90
2	BARAN	ANTA	S-NPP	25.03829	76.32519	13:52:53	D	5.20
3	BARAN	ANTA	JPSS-2	25.09706	76.34723	13:29:26	D	2.50
4	BARAN	ANTA	JPSS-2	25.10160	76.26474	13:29:26	D	2.70
5	BARAN	ANTA	JPSS-2	25.11448	76.28184	13:29:26	D	3.10
6	BARAN	ANTA	JPSS-2	25.12434	76.36588	13:29:26	D	2.20
7	BARAN	ANTA	JPSS-2	25.12466	76.30336	13:29:26	D	4.20
8	BARAN	ANTA	JPSS-2	25.12705	76.31853	13:29:26	D	3.90
9	BARAN	ANTA	JPSS-1	25.13113	76.30472	12:37:30	D	8.40
10	BARAN	ANTA	JPSS-2	25.14050	76.33941	13:29:26	D	3.30
11	BARAN	ANTA	S-NPP	25.18760	76.41417	13:52:53	D	5.60
12	BARAN	ANTA	S-NPP	25.18921	76.41406	13:52:53	D	4.70
13	BARAN	ANTA	S-NPP	25.19091	76.36903	13:52:53	D	4.50
14	BARAN	ANTA	S-NPP	25.19378	76.41751	13:52:53	D	6.30
15	BARAN	ANTA	JPSS-2	25.20330	76.35092	13:29:26	D	7.20
16	BARAN	ANTA	JPSS-1	25.20641	76.35303	12:37:30	D	4.10
17	BARAN	ANTA	S-NPP	25.20729	76.36683	13:52:53	D	4.10
18	BARAN	ANTA	JPSS-1	25.20980	76.35272	12:37:30	D	5.70
19	BARAN	ANTA	JPSS-1	25.26447	76.38113	14:17:04	D	4.10
20	BARAN	ANTA	JPSS-2	25.29241	76.35338	13:29:26	D	1.40
21	BARAN	BARAN	JPSS-2	24.98424	76.43105	13:29:26	D	4.00
22	BARAN	BARAN	S-NPP	24.99427	76.41174	13:52:53	D	2.00
23	BARAN	BARAN	JPSS-2	24.99444	76.40965	13:29:26	D	4.50
24	BARAN	BARAN	S-NPP	25.02476	76.46029	13:52:53	D	3.20
25	BARAN	BARAN	JPSS-2	25.05899	76.42851	13:29:26	D	0.40
26	BARAN	BARAN	S-NPP	25.10258	76.38507	13:52:53	D	2.00
27	BARAN	CHHABRA	JPSS-2	24.76280	76.82204	13:29:26	D	1.60
28	BARAN	CHHABRA	JPSS-2	24.79004	76.80151	13:29:26	D	3.60
29	BARAN	CHHIPABAROD	JPSS-2	24.60438	76.77005	13:29:26	D	2.80
30	BARAN	KISHANGUNJ	JPSS-1	24.89300	76.88013	12:37:30	D	5.00
31	BARAN	KISHANGUNJ	JPSS-1	24.89407	76.88107	12:37:30	D	2.80

32	BARAN	KISHANGUNJ	JPSS-2	24.89594	76.84747	13:29:26	D	5.50
33	BARAN	KISHANGUNJ	JPSS-2	24.90792	76.90334	13:29:26	D	2.40
34	BARAN	KISHANGUNJ	JPSS-2	24.91874	76.81999	13:29:26	D	3.60
35	BARAN	KISHANGUNJ	JPSS-2	24.94909	76.74837	13:29:26	D	5.50
36	BARAN	KISHANGUNJ	S-NPP	24.95063	76.74831	13:52:53	D	6.70
37	BARAN	KISHANGUNJ	JPSS-2	24.99647	76.83643	13:29:26	D	1.80
38	BARAN	KISHANGUNJ	JPSS-2	25.05994	76.67326	13:29:26	D	4.10
39	BARAN	KISHANGUNJ	JPSS-1	25.31605	76.68526	14:17:04	D	5.40
40	BARAN	MANGROL	S-NPP	25.25344	76.51637	13:52:53	D	2.80
41	BARAN	MANGROL	JPSS-2	25.28993	76.42410	13:29:26	D	3.10
42	BARAN	MANGROL	JPSS-2	25.30228	76.35151	13:29:26	D	3.70
43	BARAN	MANGROL	JPSS-2	25.34590	76.40946	13:29:26	D	2.30
44	BARAN	MANGROL	JPSS-2	25.35156	76.42400	13:29:26	D	4.00
45	BARAN	MANGROL	JPSS-2	25.35457	76.40002	13:29:26	D	2.30
46	BARAN	MANGROL	JPSS-2	25.40105	76.48093	13:29:26	D	2.40
47	BARAN	SHAHBAD	JPSS-1	25.06951	76.94539	14:17:04	D	8.00
48	BARAN	SHAHBAD	S-NPP	25.07495	76.94598	13:52:53	D	2.30
49	BUNDI	BUNDI	JPSS-2	25.28777	75.80771	13:29:26	D	6.40
50	BUNDI	BUNDI	S-NPP	25.29161	75.78055	13:52:53	D	4.10
51	BUNDI	BUNDI	S-NPP	25.29493	75.80841	13:52:53	D	5.90
52	BUNDI	BUNDI	S-NPP	25.29889	75.80785	13:52:53	D	13.40
53	BUNDI	BUNDI	JPSS-2	25.32304	75.56244	13:29:26	D	4.30
54	BUNDI	INDRAGARH	JPSS-2	25.54526	76.24689	13:29:26	D	2.70
55	BUNDI	KESHORAIPATAN	JPSS-1	25.33213	75.95753	14:17:04	D	2.80
56	BUNDI	KESHORAIPATAN	S-NPP	25.33628	75.95168	13:52:53	D	5.50
57	BUNDI	KESHORAIPATAN	S-NPP	25.33696	75.95738	13:52:53	D	5.50
58	BUNDI	KESHORAIPATAN	S-NPP	25.38318	75.92542	13:52:53	D	3.40
59	BUNDI	KESHORAIPATAN	S-NPP	25.41786	75.97861	13:52:53	D	6.50
60	BUNDI	KESHORAIPATAN	JPSS-2	25.43175	76.06864	13:29:26	D	2.60
61	BUNDI	KESHORAIPATAN	S-NPP	25.44901	76.00057	13:52:53	D	4.50
62	HANUMANGARH	HANUMANGARH	JPSS-2	29.59440	74.31373	13:29:26	D	2.50
63	HANUMANGARH	NOHAR	JPSS-2	29.28492	74.54855	13:29:26	D	3.80
64	HANUMANGARH	SANGHRIYA	JPSS-2	29.61896	74.40028	13:29:26	D	4.20
65	HANUMANGARH	SANGHRIYA	JPSS-2	29.74989	74.38575	13:29:26	D	1.80
66	HANUMANGARH	SANGHRIYA	S-NPP	29.78241	74.35339	13:52:53	D	2.30

67	HANUMANGARH	TIBI	JPSS-2	29.47031	74.57678	13:29:26	D	5.00
68	HANUMANGARH	TIBI	S-NPP	29.53522	74.48626	13:52:53	D	3.00
69	HANUMANGARH	TIBI	JPSS-2	29.57891	74.44607	13:29:26	D	3.00
70	HANUMANGARH	TIBI	JPSS-2	29.58222	74.44536	13:29:26	D	3.00
71	HANUMANGARH	TIBI	JPSS-1	29.62214	74.43165	14:17:04	D	3.10
72	JHALAWAR	KHANPUR	JPSS-2	24.74272	76.28203	13:29:26	D	5.20
73	KOTA	DIGOD	JPSS-2	25.07980	76.08475	13:29:26	D	3.40
74	KOTA	DIGOD	JPSS-2	25.21031	76.09105	13:29:26	D	5.90
75	KOTA	DIGOD	JPSS-2	25.22323	76.10821	13:29:26	D	3.30
76	KOTA	DIGOD	S-NPP	25.27327	76.07597	13:52:53	D	2.30
77	KOTA	DIGOD	S-NPP	25.27371	76.07981	13:52:53	D	3.30
78	KOTA	DIGOD	S-NPP	25.27818	76.08310	13:52:53	D	3.30
79	KOTA	DIGOD	JPSS-2	25.28979	76.07570	13:29:26	D	2.50
80	KOTA	DIGOD	S-NPP	25.39150	76.27831	13:52:53	D	1.90
81	KOTA	DIGOD	JPSS-2	25.45106	76.27670	13:29:26	D	3.00
82	KOTA	LADPURA	JPSS-2	25.04287	75.98167	13:29:26	D	2.80
83	KOTA	LADPURA	JPSS-2	25.14574	76.02887	13:29:26	D	5.70
84	KOTA	LADPURA	S-NPP	25.19216	75.94976	13:52:53	D	3.90
85	KOTA	LADPURA	JPSS-1	25.26479	75.93900	14:17:04	D	7.10
86	KOTA	LADPURA	JPSS-1	25.26762	75.94019	14:17:04	D	7.20
87	KOTA	PIPALDA	JPSS-2	25.46622	76.39499	13:29:26	D	1.50
88	KOTA	PIPALDA	S-NPP	25.46634	76.32475	13:52:53	D	4.00
89	KOTA	PIPALDA	S-NPP	25.46644	76.39821	13:52:53	D	3.00
90	KOTA	PIPALDA	JPSS-2	25.47451	76.44805	13:29:26	D	4.40
91	KOTA	PIPALDA	JPSS-1	25.53347	76.33865	14:17:04	D	3.50
92	KOTA	PIPALDA	JPSS-2	25.61009	76.33628	13:29:26	D	2.60
93	KOTA	PIPALDA	JPSS-2	25.65845	76.42464	13:29:26	D	6.80
94	KOTA	SANGOD	JPSS-2	24.87964	76.37302	13:29:26	D	2.40
95	KOTA	SANGOD	JPSS-2	24.95626	76.20992	13:29:26	D	3.90
96	SWAIMADHOPUR	KHANDAR	S-NPP	25.94613	76.59671	13:52:53	D	4.20
97	SWAIMADHOPUR	KHANDAR	S-NPP	25.95494	76.71236	13:52:53	D	2.70
98	SWAIMADHOPUR	KHANDAR	S-NPP	25.95916	76.71179	13:52:53	D	2.70
99	SWAIMADHOPUR	KHANDAR	JPSS-2	25.96139	76.60213	13:29:26	D	10.90
100	SWAIMADHOPUR	KHANDAR	JPSS-2	25.96467	76.60151	13:29:26	D	6.20

### Details of residue burning events in Madhya Pradesh on 16-Oct-2024

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m <sup>2</sup> )
1	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.56704	77.54884	13:52:53	D	3.50
2	ASHOKNAGAR	ASHOKNAGAR	JPSS-1	24.61032	77.57841	12:37:30	D	6.50
3	ASHOKNAGAR	ASHOKNAGAR	JPSS-1	24.61324	77.57849	12:37:30	D	6.60
4	ASHOKNAGAR	ISAGARH	JPSS-2	24.69876	77.81744	13:29:26	D	3.30
5	ASHOKNAGAR	ISAGARH	S-NPP	24.70292	77.80881	13:52:53	D	3.20
6	ASHOKNAGAR	ISAGARH	JPSS-2	24.86008	77.87471	13:29:26	D	2.70
7	ASHOKNAGAR	ISAGARH	JPSS-2	24.87513	77.63049	13:29:26	D	2.50
8	ASHOKNAGAR	ISAGARH	JPSS-1	24.88018	77.59330	12:37:30	D	3.10
9	ASHOKNAGAR	ISAGARH	JPSS-1	24.89992	77.77820	12:37:30	D	2.00
10	ASHOKNAGAR	ISAGARH	S-NPP	24.93857	77.87337	13:52:53	D	2.90
11	ASHOKNAGAR	MUNGAOLI	JPSS-2	24.30226	77.91857	13:29:26	D	3.70
12	BHIND	LAHAR	S-NPP	26.07406	78.81489	13:52:53	D	4.20
13	BHIND	LAHAR	S-NPP	26.07603	78.81739	13:52:53	D	7.80
14	BHIND	LAHAR	S-NPP	26.11838	78.92273	13:52:53	D	5.60
15	BHIND	MAJHGAWAN	JPSS-2	26.23135	78.88733	13:29:26	D	1.90
16	CHHATARPUR	GOURIHAR	JPSS-2	25.32107	80.03040	02:19:28	N	0.70
17	CHHINDWARA	CHAURAI	JPSS-2	22.19008	79.32913	13:29:26	D	2.30
18	DATIA	SEONDHA	JPSS-2	26.06818	78.79572	13:29:26	D	5.70
19	DATIA	SEONDHA	JPSS-2	26.08231	78.72213	13:29:26	D	3.90
20	DEWAS	TONK KHURD	JPSS-2	23.14443	76.26733	02:19:28	N	0.30
21	DHAR	DHAR	JPSS-2	22.70692	75.36317	13:29:26	D	3.30
22	GUNA	ARON	JPSS-2	24.33052	77.51446	13:29:26	D	2.20
23	GUNA	ARON	S-NPP	24.36562	77.40710	13:52:53	D	2.30
24	GUNA	ARON	JPSS-2	24.40236	77.47047	13:29:26	D	4.40
25	GUNA	GUNA	JPSS-2	24.49144	77.33904	13:29:26	D	3.10
26	GUNA	GUNA	JPSS-2	24.65500	77.14321	13:29:26	D	5.00
27	GUNA	GUNA	JPSS-2	24.67894	77.38998	13:29:26	D	7.10
28	GUNA	GUNA	JPSS-2	24.69449	77.10873	13:29:26	D	1.90
29	GUNA	GUNA	S-NPP	24.72106	77.02901	13:52:53	D	3.80

30	GUNA	GUNA	S-NPP	24.72577	77.03271	13:52:53	D	8.70
31	GUNA	GUNA	S-NPP	24.72625	77.03181	13:52:53	D	8.20
32	GUNA	GUNA	JPSS-2	24.72629	77.02946	13:29:26	D	5.50
33	GUNA	GUNA	JPSS-2	24.77996	77.27091	13:29:26	D	3.60
34	GUNA	GUNA	JPSS-2	24.81901	76.92380	13:29:26	D	2.50
35	GUNA	GUNA	JPSS-2	24.82421	76.95766	13:29:26	D	4.00
36	GUNA	GUNA	JPSS-2	24.83522	76.96336	13:29:26	D	3.90
37	GUNA	GUNA	S-NPP	24.85632	76.97781	13:52:53	D	1.90
38	GUNA	GUNA	JPSS-2	24.85725	76.97479	13:29:26	D	8.20
39	GUNA	GUNA	JPSS-2	24.88817	76.97280	13:29:26	D	2.90
40	GUNA	GUNA	JPSS-2	24.89532	76.97536	13:29:26	D	5.70
41	GUNA	GUNA	S-NPP	24.89538	76.98132	13:52:53	D	5.80
42	GUNA	GUNA	JPSS-2	24.91143	77.08080	13:29:26	D	2.60
43	GUNA	GUNA	JPSS-2	24.91924	77.02129	13:29:26	D	7.70
44	GUNA	GUNA	S-NPP	24.93073	76.99480	13:52:53	D	6.10
45	GUNA	GUNA	S-NPP	24.93123	76.99393	13:52:53	D	6.00
46	GUNA	GUNA	JPSS-2	24.93336	77.00320	13:29:26	D	8.00
47	GUNA	GUNA	JPSS-1	24.93432	77.04667	12:37:30	D	6.80
48	GUNA	GUNA	JPSS-1	24.93692	77.00577	14:17:04	D	7.20
49	GUNA	GUNA	JPSS-1	24.94024	77.00598	14:17:04	D	7.40
50	GUNA	GUNA	S-NPP	25.00978	76.93233	13:52:53	D	4.10
51	GUNA	GUNA	JPSS-2	25.00979	76.92310	13:29:26	D	4.60
52	GUNA	GUNA	JPSS-2	25.01094	76.93064	13:29:26	D	3.70
53	GUNA	GUNA	JPSS-2	25.01152	76.93440	13:29:26	D	3.70
54	GUNA	GUNA	JPSS-1	25.01166	76.93315	14:17:04	D	9.40
55	GUNA	GUNA	JPSS-1	25.01202	76.93862	14:17:04	D	10.70
56	GUNA	GUNA	JPSS-2	25.01231	76.89552	13:29:26	D	6.00
57	GUNA	GUNA	JPSS-2	25.01365	76.92626	13:29:26	D	5.30
58	GUNA	GUNA	S-NPP	25.01401	76.93178	13:52:53	D	4.10
59	GUNA	GUNA	JPSS-2	25.01423	76.93003	13:29:26	D	9.60
60	GUNA	GUNA	JPSS-1	25.01442	76.93416	14:17:04	D	13.20
61	GUNA	GUNA	S-NPP	25.01449	76.93604	13:52:53	D	4.90
62	GUNA	GUNA	S-NPP	25.01498	76.94032	13:52:53	D	4.90
63	GUNA	GUNA	JPSS-2	25.01538	76.93758	13:29:26	D	11.00



64	GUNA	GUNA	JPSS-1	25.01591	76.93385	12:37:30	D	5.40
65	GUNA	GUNA	JPSS-1	25.01646	76.93368	12:37:30	D	5.40
66	GUNA	GUNA	JPSS-1	25.01719	76.93901	12:37:30	D	5.40
67	GUNA	GUNA	JPSS-1	25.01772	76.93886	12:37:30	D	5.40
68	GUNA	GUNA	JPSS-2	25.01809	76.93320	13:29:26	D	9.60
69	GUNA	GUNA	JPSS-1	25.01888	76.97181	12:37:30	D	4.50
70	GUNA	GUNA	JPSS-1	25.01921	76.97179	12:37:30	D	4.60
71	GUNA	GUNA	JPSS-1	25.02490	76.97004	12:37:30	D	4.50
72	GUNA	GUNA	JPSS-1	25.02523	76.96999	12:37:30	D	4.10
73	GUNA	GUNA	JPSS-1	25.03126	76.99568	12:37:30	D	3.80
74	GUNA	GUNA	JPSS-1	25.03143	76.99571	12:37:30	D	3.90
75	GUNA	GUNA	AQUA	25.01200	76.93100	13:59:01	D	22.10
76	GUNA	KUMBHRAJ	JPSS-2	24.48121	77.02848	13:29:26	D	3.90
77	INDORE	DEPALPUR	S-NPP	22.87944	75.54202	13:52:53	D	2.00
78	INDORE	DEPALPUR	JPSS-1	23.04430	75.57903	14:17:04	D	3.40
79	INDORE	SANWER	JPSS-2	22.93797	75.80664	13:29:26	D	3.80
80	INDORE	SANWER	JPSS-2	22.98145	75.89083	13:29:26	D	3.80
81	MANDSAUR	MANDSAUR	JPSS-2	23.77124	74.94286	13:29:26	D	5.80
82	MANDSAUR	MANDSAUR	JPSS-2	23.77192	74.94693	13:29:26	D	12.30
83	MANDSAUR	MANDSAUR	JPSS-2	23.85385	75.07802	13:29:26	D	3.50
84	MANDSAUR	MANDSAUR	JPSS-2	23.85657	75.07332	13:29:26	D	2.30
85	MANDSAUR	SITAMAU	JPSS-2	24.03855	75.34255	13:29:26	D	7.80
86	MANDSAUR	SITAMAU	JPSS-2	24.04528	75.34122	13:29:26	D	3.20
87	MANDSAUR	SITAMAU	JPSS-2	24.08376	75.33376	13:29:26	D	1.20
88	MORENA	JORA	JPSS-1	26.33131	77.71734	12:37:30	D	3.20
89	MORENA	JORA	S-NPP	26.36213	77.67880	13:52:53	D	7.00
90	MORENA	JORA	JPSS-2	26.36289	77.66955	13:29:26	D	2.50
91	MORENA	JORA	JPSS-2	26.37568	77.68722	13:29:26	D	1.80
92	MORENA	JORA	S-NPP	26.37777	77.69715	13:52:53	D	3.40
93	MORENA	KAILARAS	S-NPP	26.32000	77.66882	13:52:53	D	2.70
94	NARSHIMAPURA	GOTECAON	JPSS-1	22.91879	79.56742	12:37:30	D	2.90
95	NIMACH	JAWAD	JPSS-2	24.57599	74.80848	02:19:28	N	0.70
96	SAGAR	REHLI	JPSS-2	23.56425	79.08953	13:29:26	D	1.90
97	SAGAR	REHLI	JPSS-2	23.58283	79.07434	13:29:26	D	2.70

98	SATNA	MAIHAR	JPSS-2	24.16235	80.70085	02:19:28	N	1.60
99	SEHORE	SEHORE	JPSS-2	23.46015	77.18768	13:29:26	D	3.70
100	SHAJAPUR	GULNA	JPSS-2	23.38050	76.52557	13:29:26	D	1.50
101	SHAJAPUR	SUSNER	JPSS-2	23.93803	76.00278	13:29:26	D	2.00
102	SHIVPURI	KOLARAS	JPSS-1	24.92651	77.63042	12:37:30	D	6.80
103	SHIVPURI	KOLARAS	JPSS-2	24.98001	77.72094	13:29:26	D	3.80
104	SHIVPURI	KOLARAS	S-NPP	24.99575	77.72958	13:52:53	D	2.50
105	SHIVPURI	KOLARAS	JPSS-2	24.99796	77.72550	13:29:26	D	2.50
106	SHIVPURI	KOLARAS	JPSS-2	25.05232	77.68063	13:29:26	D	5.20
107	SHIVPURI	KOLARAS	JPSS-2	25.05271	77.63760	13:29:26	D	2.00
108	SINGRAULI	DEOSAR	JPSS-2	24.19994	82.53181	02:19:28	N	1.20
109	UJJAIN	BARNAGAR	JPSS-2	23.25442	75.32934	13:29:26	D	1.60
110	UJJAIN	GHATIYA	JPSS-2	23.32445	75.83801	13:29:26	D	2.50
111	VIDESHA	GYARASPUR	JPSS-2	23.70074	78.03549	13:29:26	D	2.20
112	VIDESHA	LETERI	JPSS-2	24.04404	77.40041	13:29:26	D	4.20

**Details of residue burning events in Delhi on 16-Oct-2024**

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m <sup>2</sup> )
1	NORTH	ALIPUR	JPSS-2	28.82361	77.16679	02:19:28	N	0.8

## 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	Both
2.	JPSS-1 (NOAA -20)	VIIRS	375	Both
3.	JPSS-2 (NOAA-21)	VIIRS	375	Both
4.	Aqua	MODIS	1000	Both

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

### Study Team

ICAR - HQ	Dr Rajbir Singh	ADG-NRM (AAF&CC)	<a href="mailto:adgagroandaf@gmail.com">adgagroandaf@gmail.com</a>
ICAR - IARI	<b>Dr V.K. Sehgal</b>	Principal & Nodal Scientist	<a href="mailto:iaricreams@gmail.com">iaricreams@gmail.com</a>
	Dr Rajkumar Dhakar	Senior Scientist	<a href="mailto:raidhakar.iari@gmail.com">raidhakar.iari@gmail.com</a>
	Mr Mohd Jahangir	Lab Assistant (KRISHI)	<a href="mailto:mjahangir198@gmail.com">mjahangir198@gmail.com</a>
ICAR - ATARI	Dr Parvender Sheoran	Director ATARI (Zone-I) Ludhiana	<a href="mailto:zcu1ldh@gmail.com">zcu1ldh@gmail.com</a>
	Dr. J.P. Mishra	Director ATARI (Zone-II) Jodhpur	<a href="mailto:jp.mishra67@gov.in">jp.mishra67@gov.in</a>
	Dr S.K. Dubey	Director ATARI (Zone-III) Kanpur	<a href="mailto:zpdicarkanpur@gmail.com">zpdicarkanpur@gmail.com</a>
ICAR - IASRI	Dr Rajender Parsad	Director	<a href="mailto:rajender.parsad@icar.gov.in">rajender.parsad@icar.gov.in</a>

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](#)

\*\*\*