



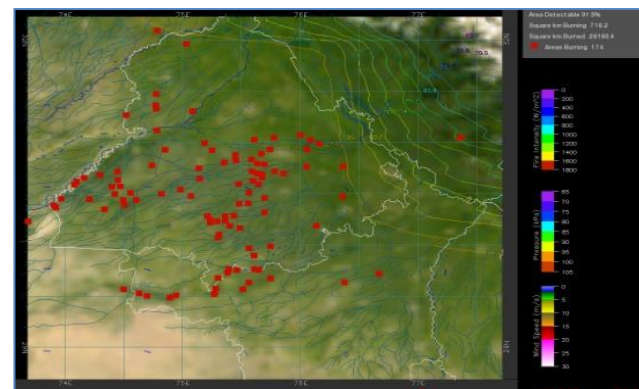
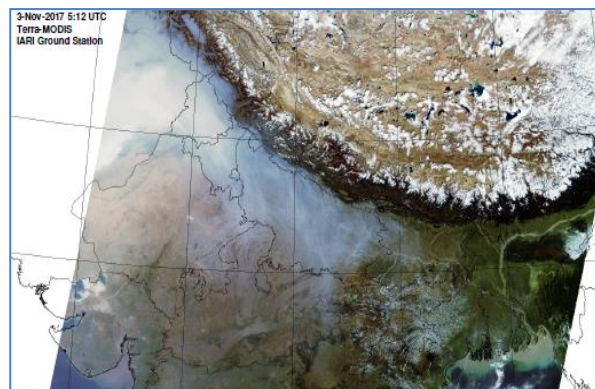
**Bulletin  
No. 67**

**Events Date:  
20-Nov-2021**

**Issued on:  
20-Nov-2021**



# **MONITORING PADDY RESIDUE BURNING IN INDIA USING SATELLITE REMOTE SENSING DURING 2021**



**Prepared by:**

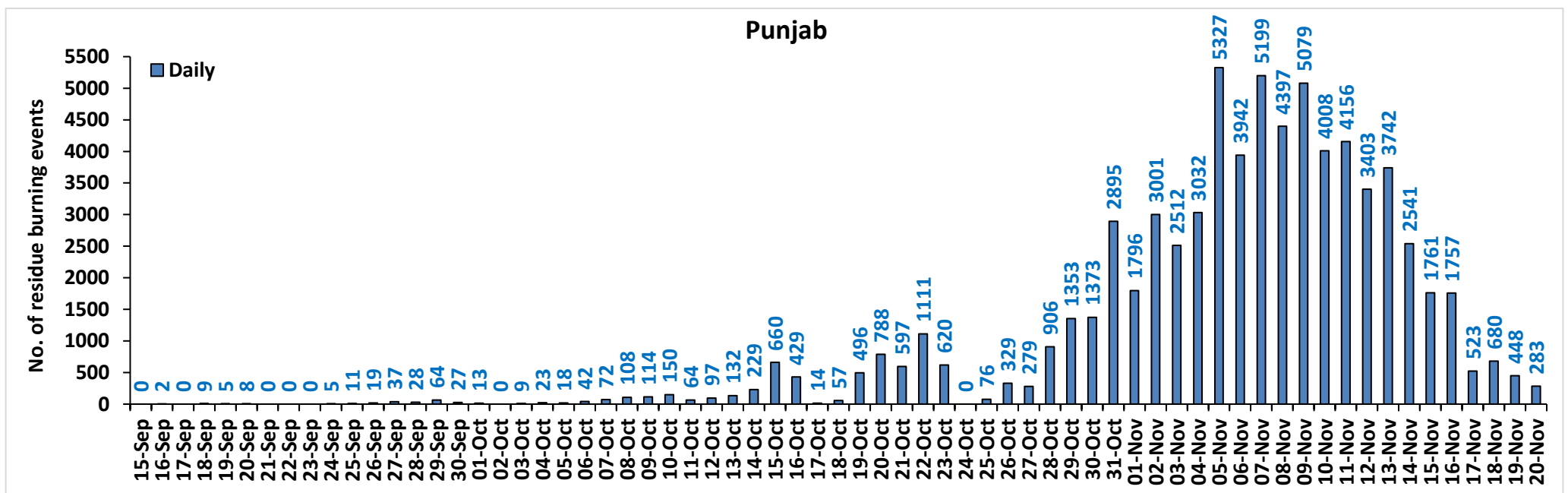
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,  
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

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

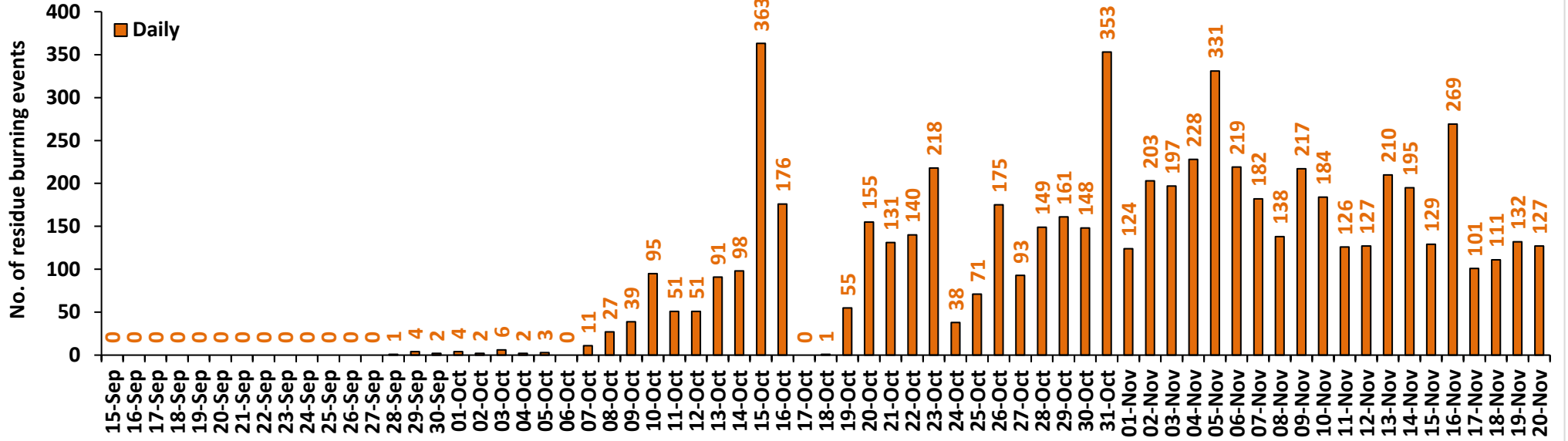
## Highlights for 20-November-2021

- The active fire events due to rice residue burning were monitored using satellite remote sensing, following the new "Standard Protocol for Estimation of Crop Residue Burning Fire Events using Satellite Data".
- Satellites detected **489** residue burning events in the six study States on 20-Nov-2021.
- The state wise events detected on 20-Nov-21 were **283** in Punjab, **127** in Haryana, **20** in UP, **0** in Delhi, **53** in Raj and **6** in MP.
- Detection of burning events by satellites was hampered due to scattered clouds over UP, MP and south eastern Rajasthan.
- The number of events has decreased from **680** on 19-Nov-2021 to **489** on 20-Nov-2021 in the six study states.
- Total **87242** burning events were detected in the six states between 15-Sept-2021 and 20-Nov-2021, which are distributed as **70856**, **6464**, **2808**, **4**, **1068** and **6042** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.
- Overall, the total burning events recorded in the six states are **16.0%** less than in 2020 till date. Punjab recorded **13.7%** reduction, Haryana recorded **66.4%** increase, UP recorded **14.0%** reduction, Delhi recorded **55.6%** reduction, Rajasthan recorded **29.7%** reduction and MP recorded **53.7%** reduction, in the current season than in 2020.

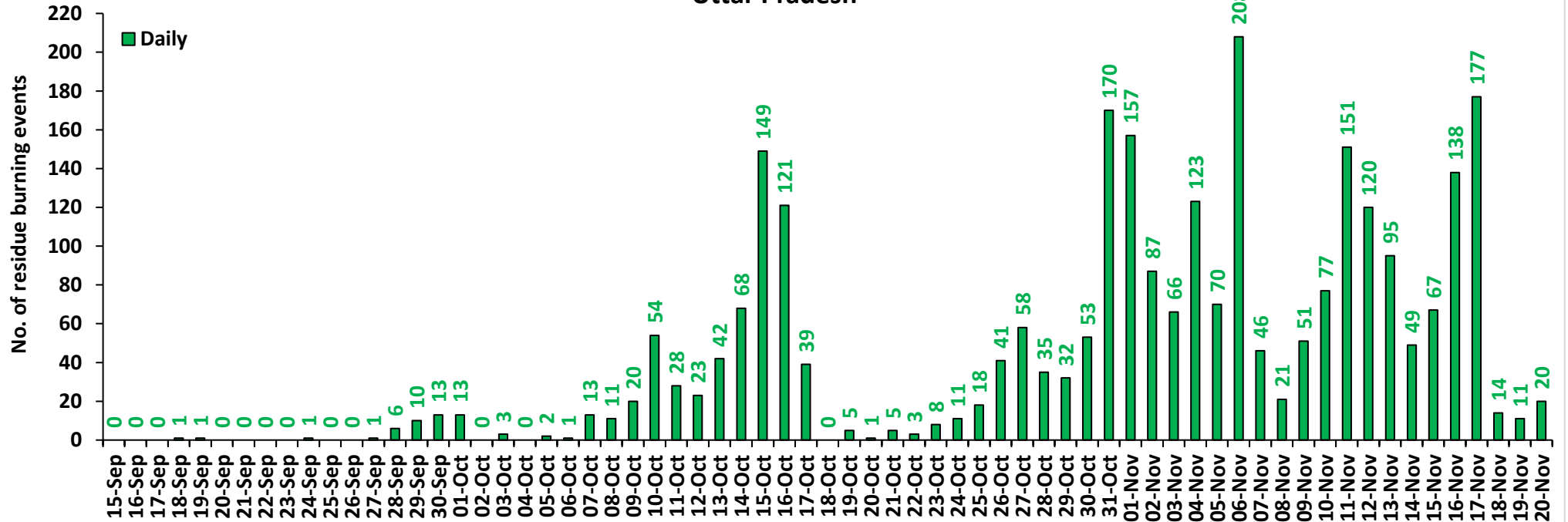
### Temporal distribution of rice residue burning events for the study States in 2021



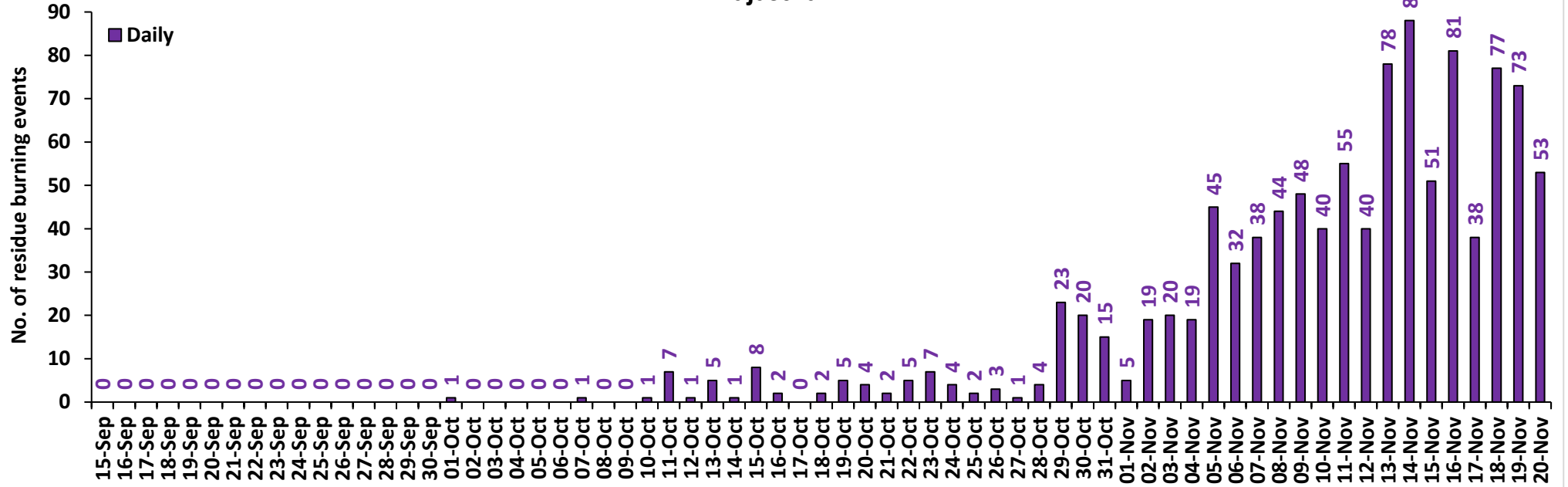
### Haryana



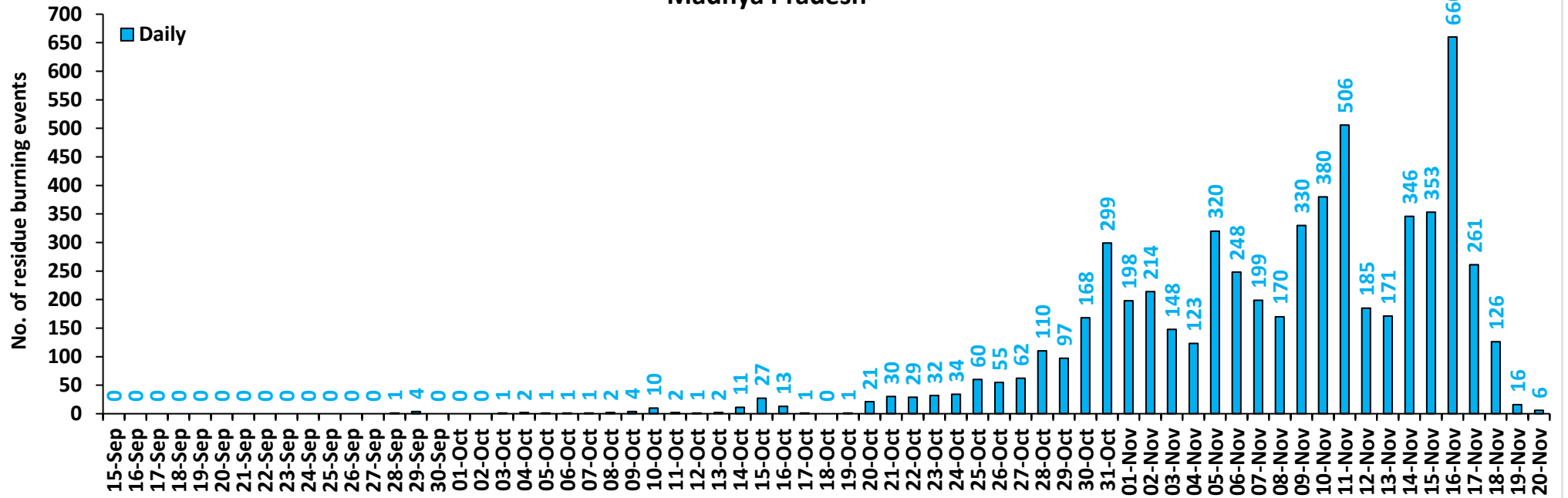
### Uttar Pradesh



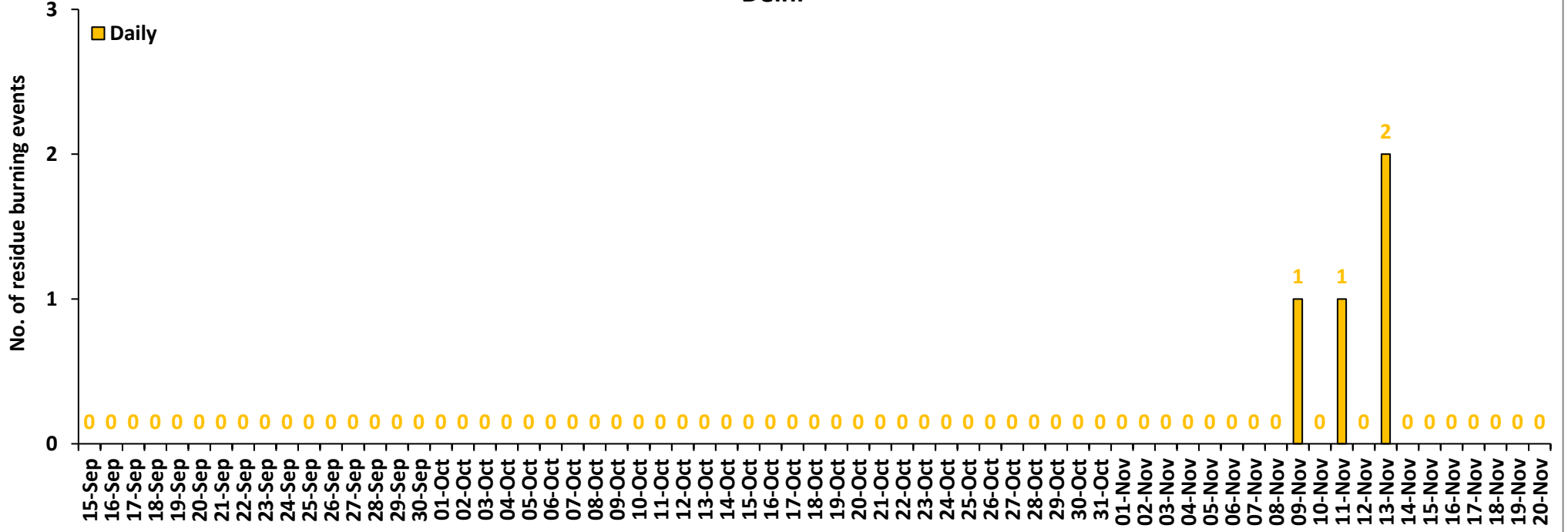
### Rajasthan



### Madhya Pradesh

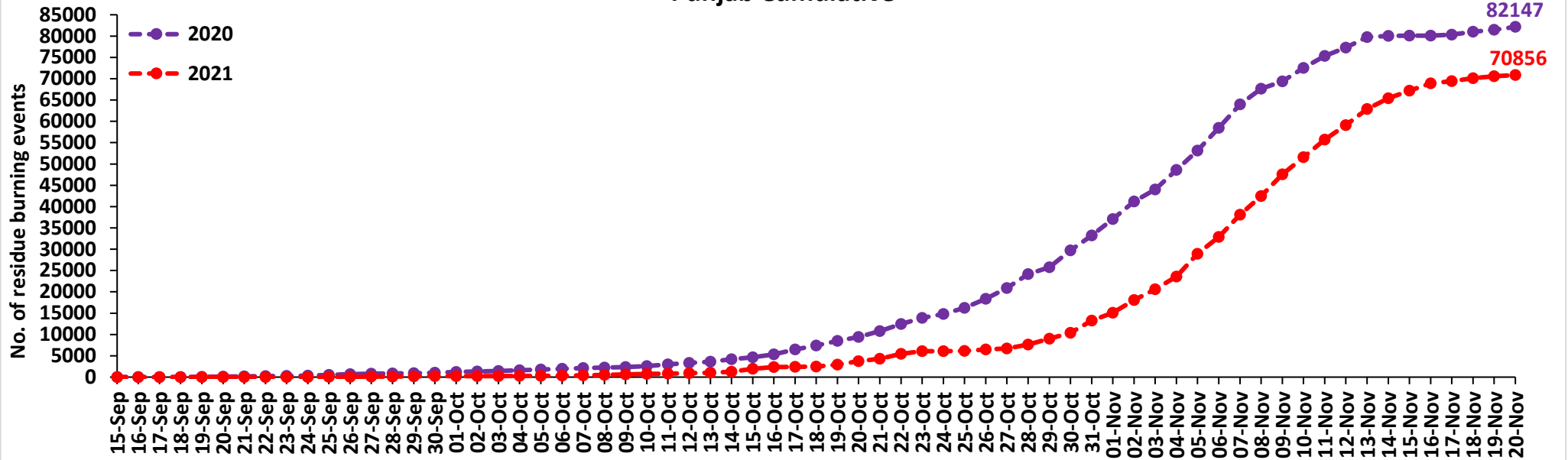


# Delhi

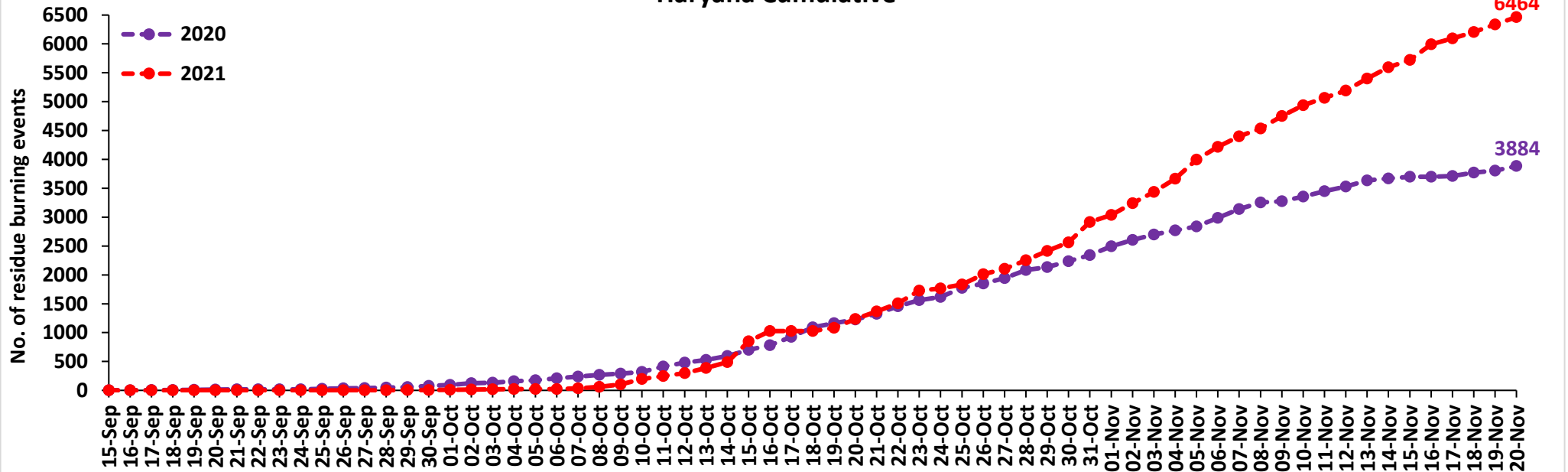


**Comparison of residue burning events in current year (2021) with previous year (2020) for the study States**

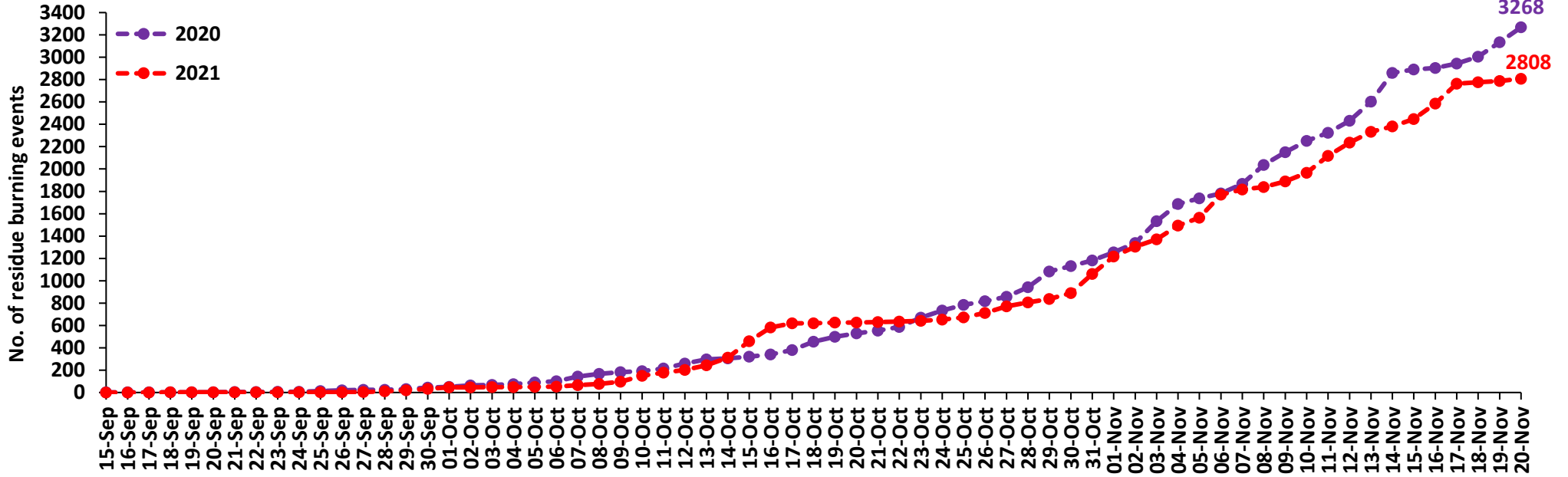
**Punjab Cumulative**



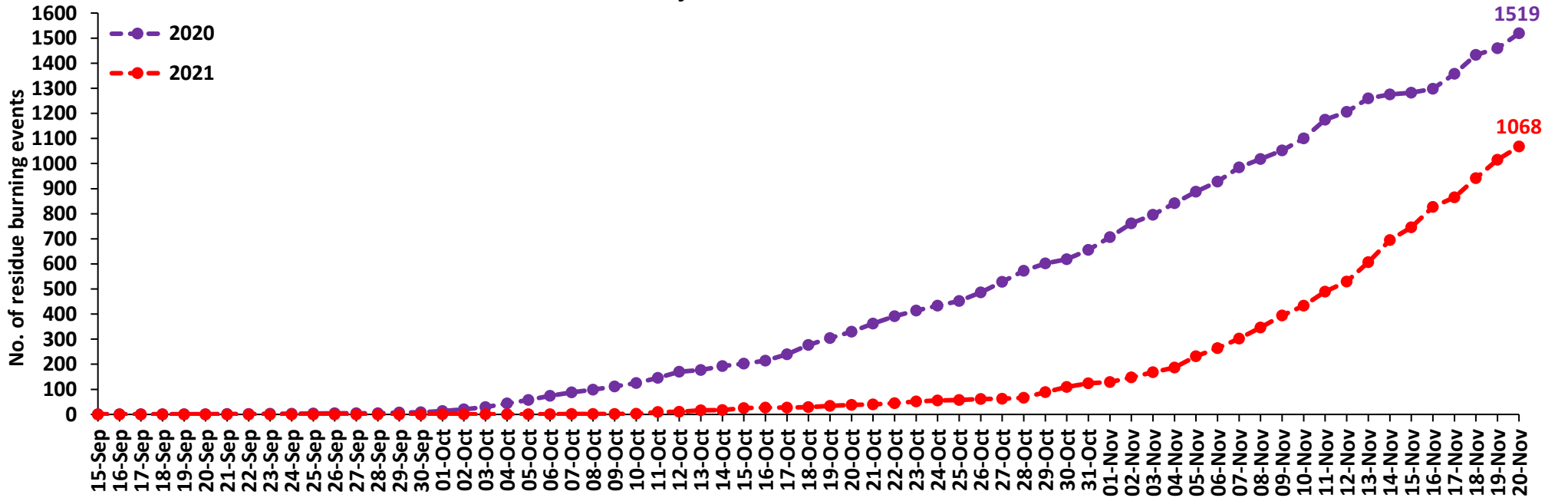
**Haryana Cumulative**



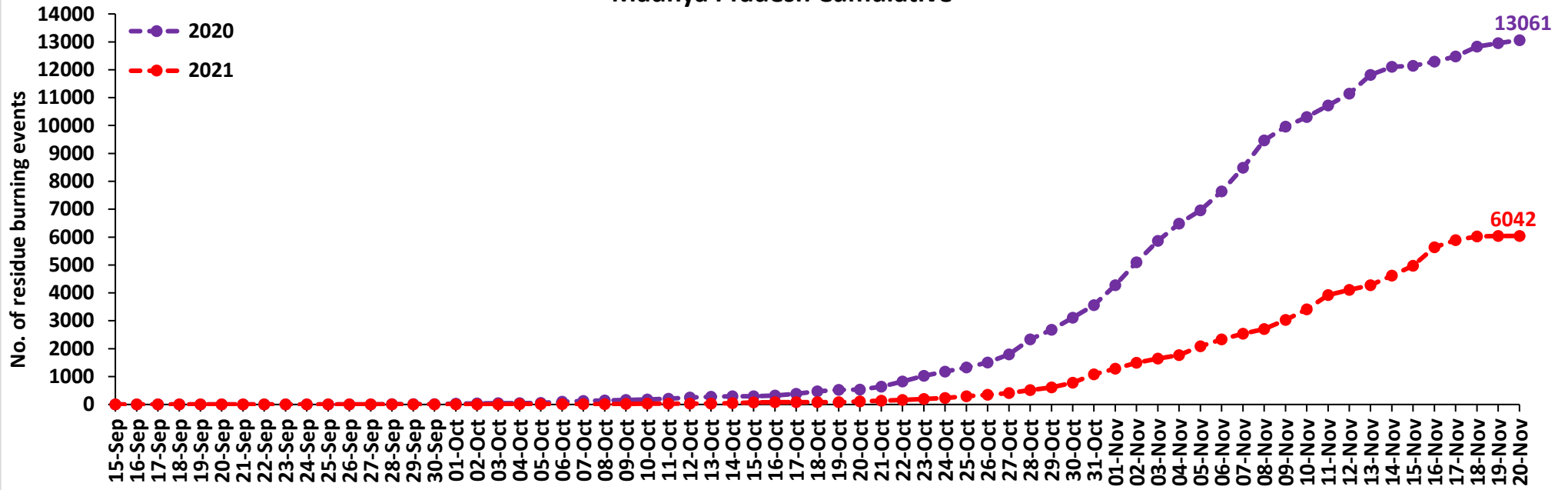
### Uttar Pradesh Cumulative



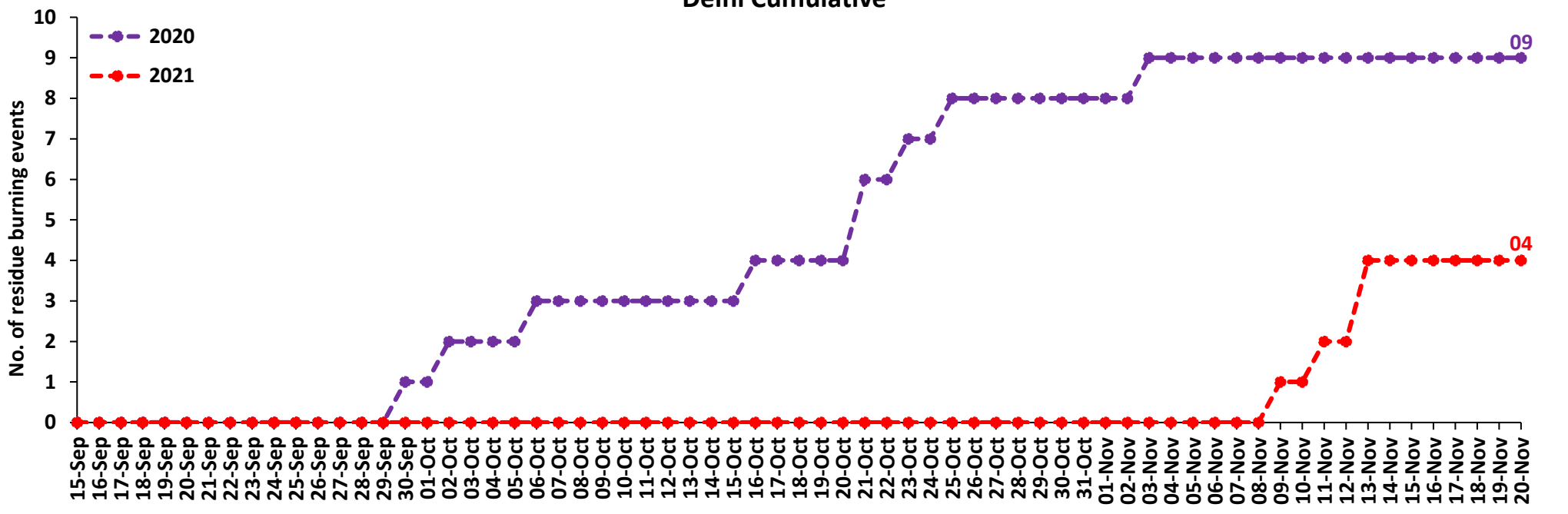
### Rajasthan Cumulative



### Madhya Pradesh Cumulative



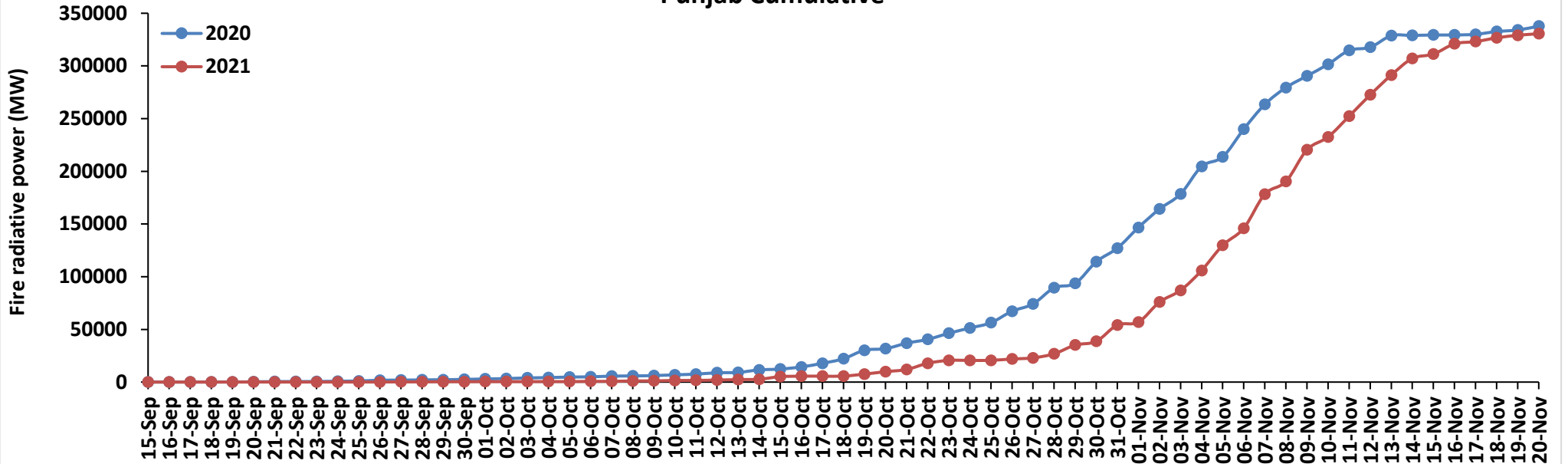
### Delhi Cumulative



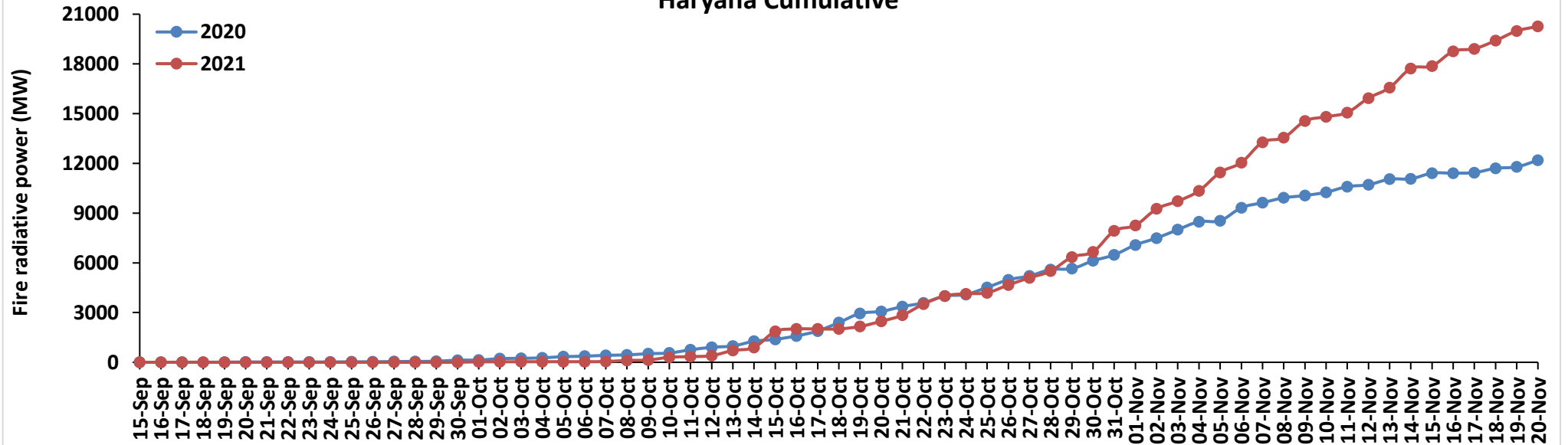


# Comparison of residue burning fire power in current year (2021) with previous year (2020) for the study States

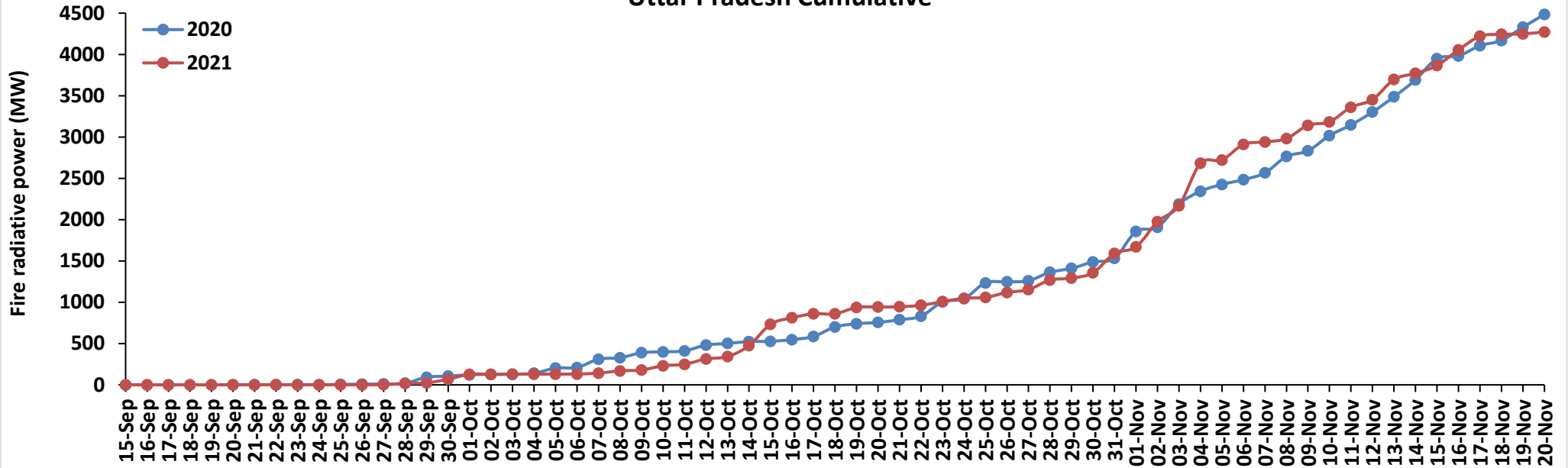
## Punjab Cumulative



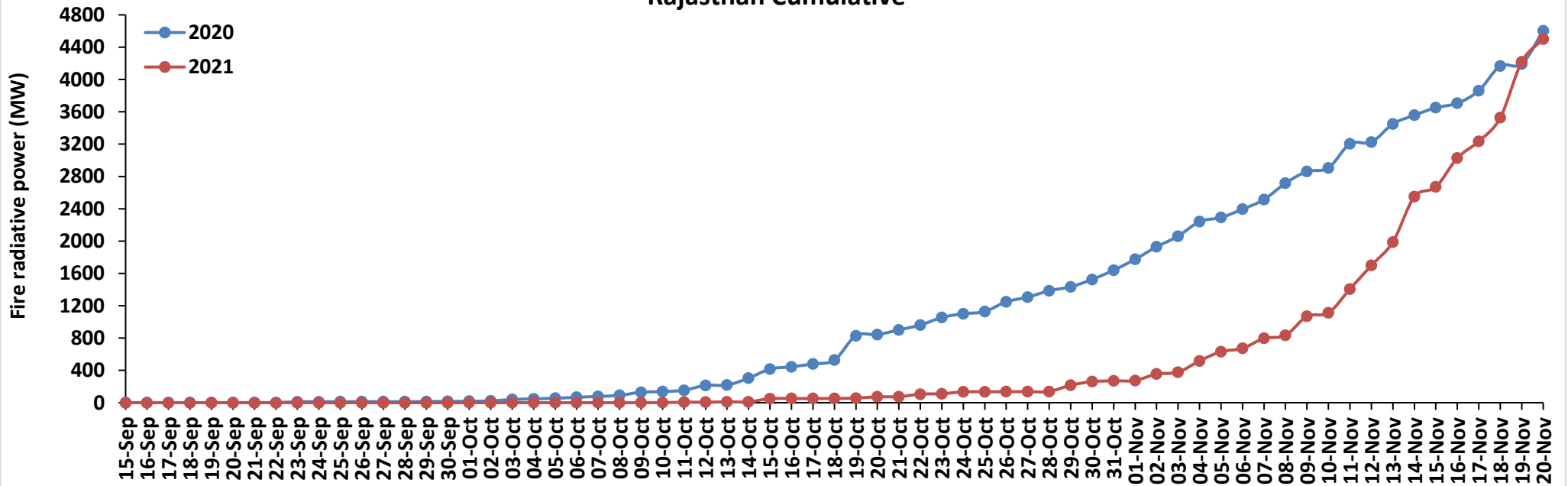
## Haryana Cumulative



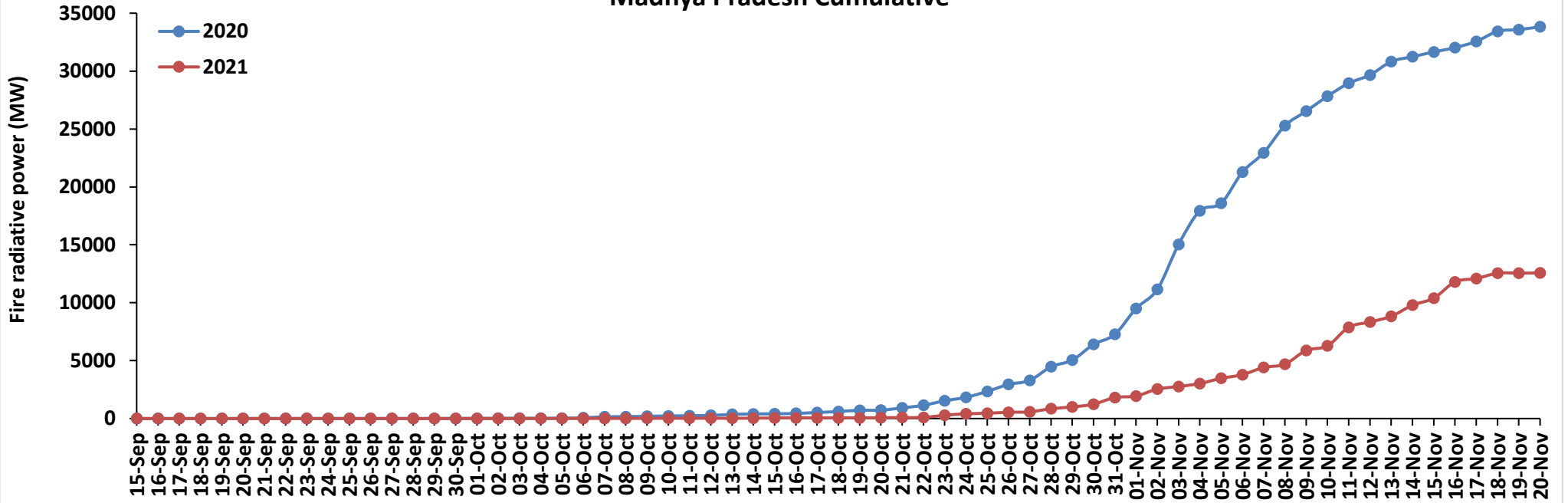
### Uttar Pradesh Cumulative



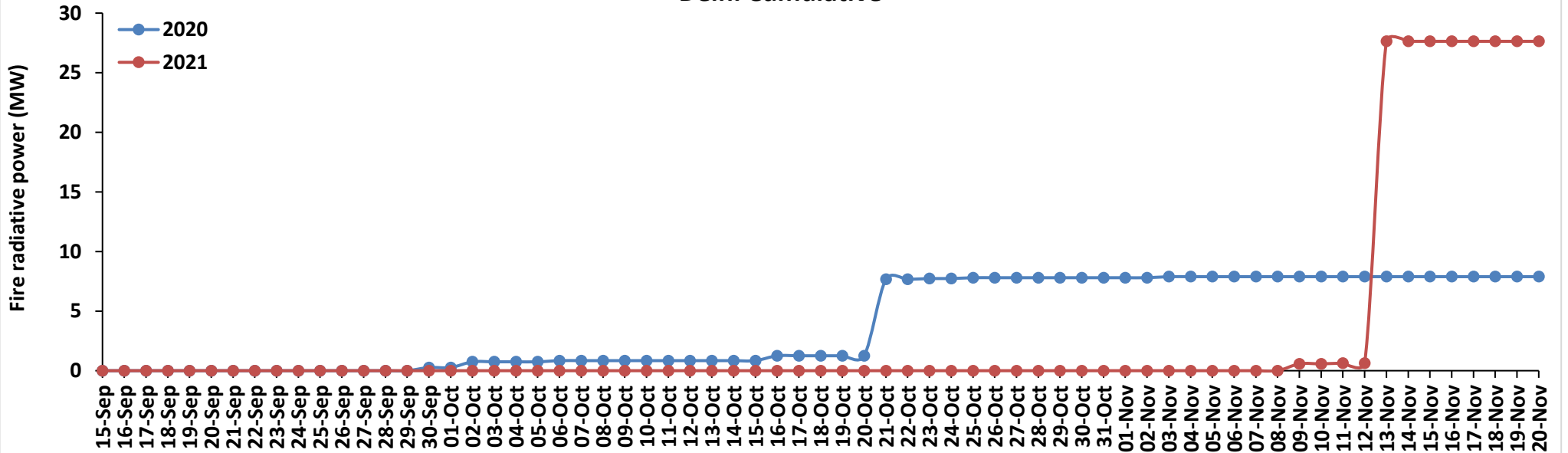
### Rajasthan Cumulative



### Madhya Pradesh Cumulative

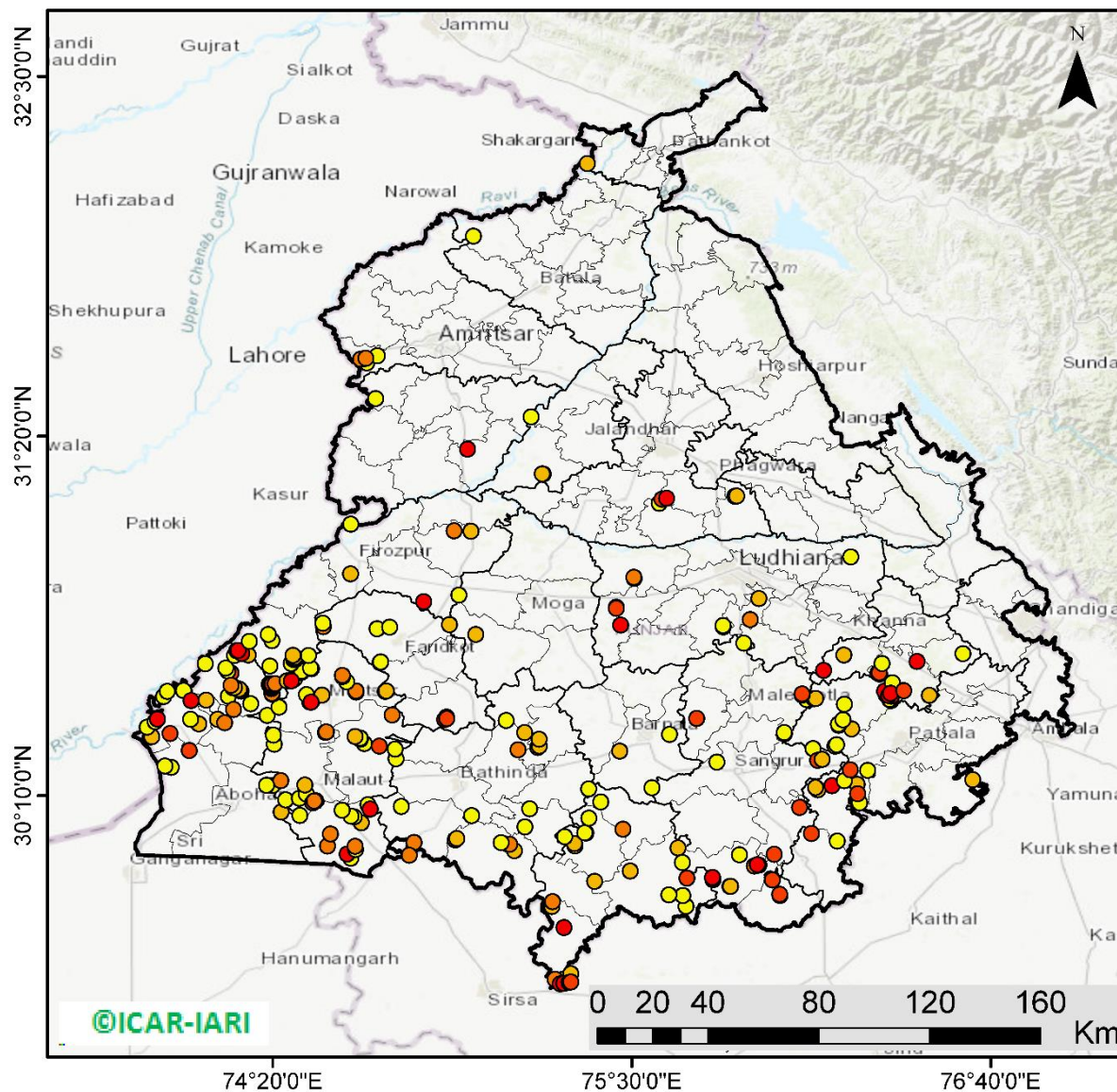


### Delhi Cumulative



# Punjab

## RICE RESIDUE BURNING IN PUNJAB



**283** burning events detected in Punjab on 20th November 2021

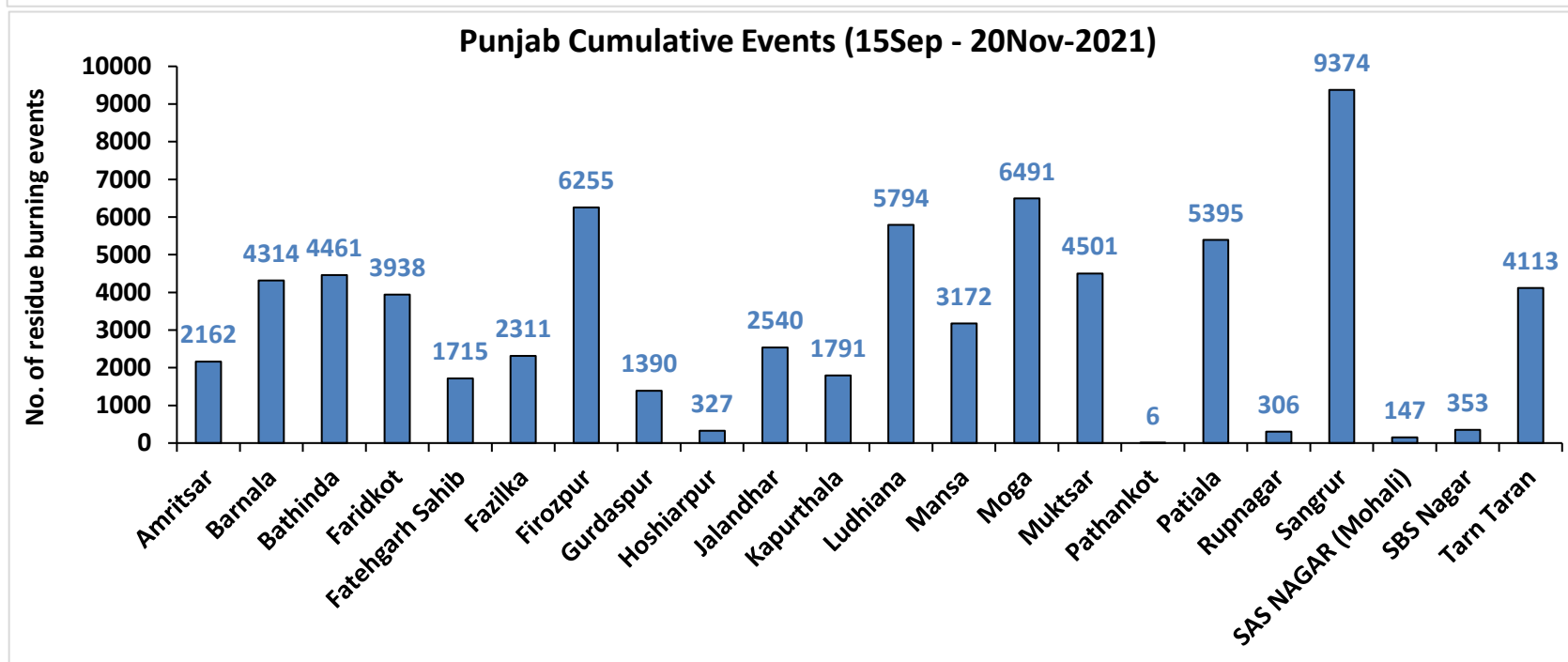
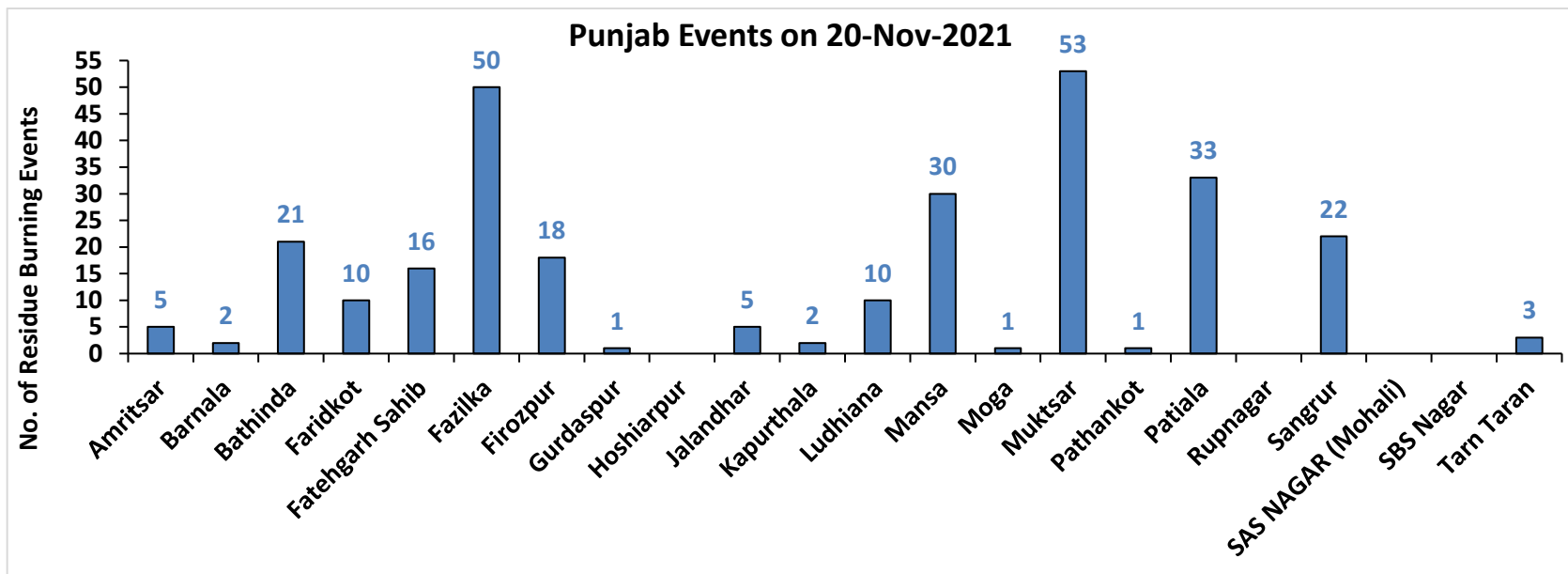
### Fire Intensity (W/m<sup>2</sup>)

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



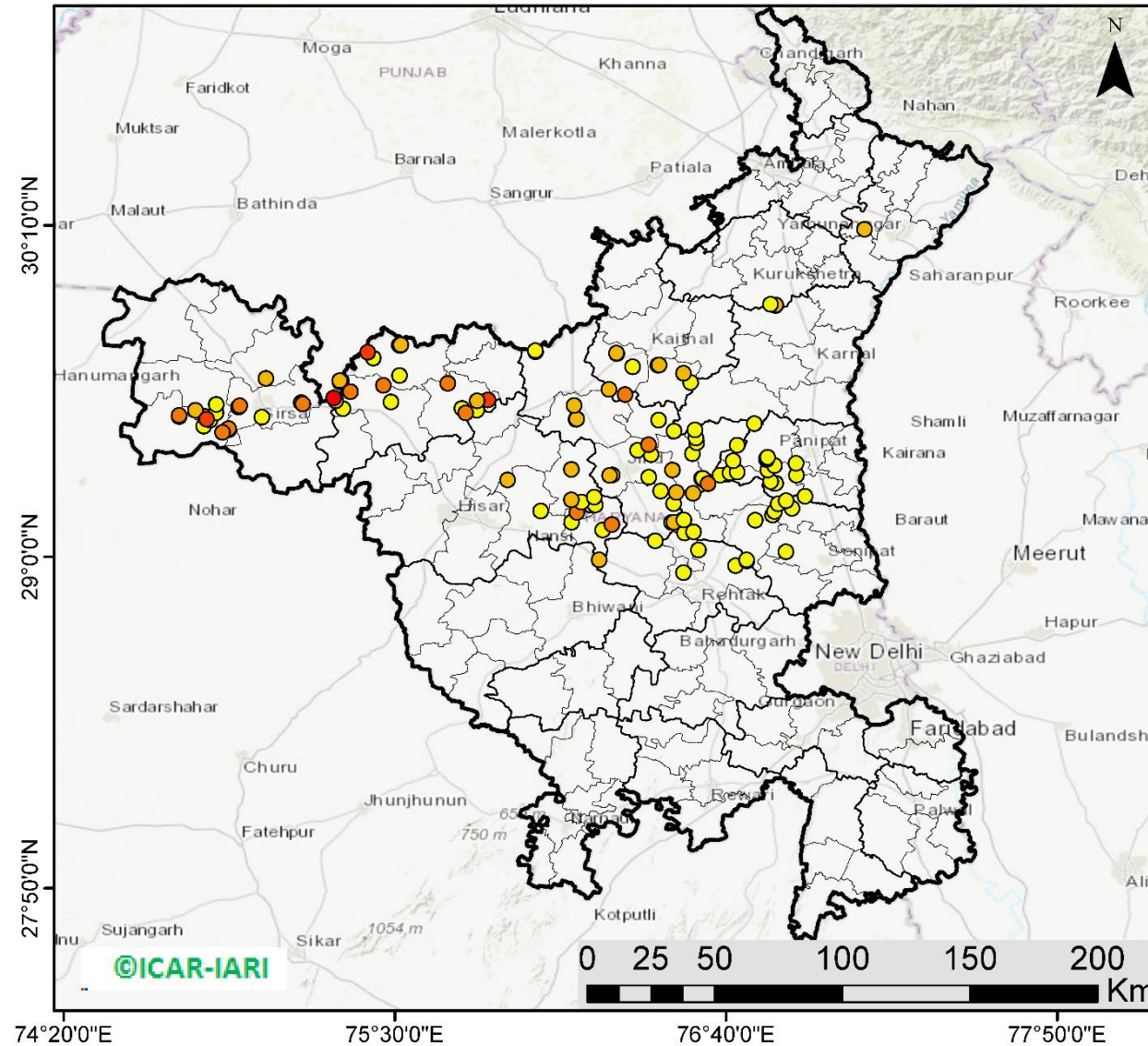
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

## District-wise cumulative number of residues burning events in Punjab (15 Sep - 20 Nov-2021)



# Haryana

## RICE RESIDUE BURNING IN HARYANA



**127** burning events detected in Haryana on 20th November 2021

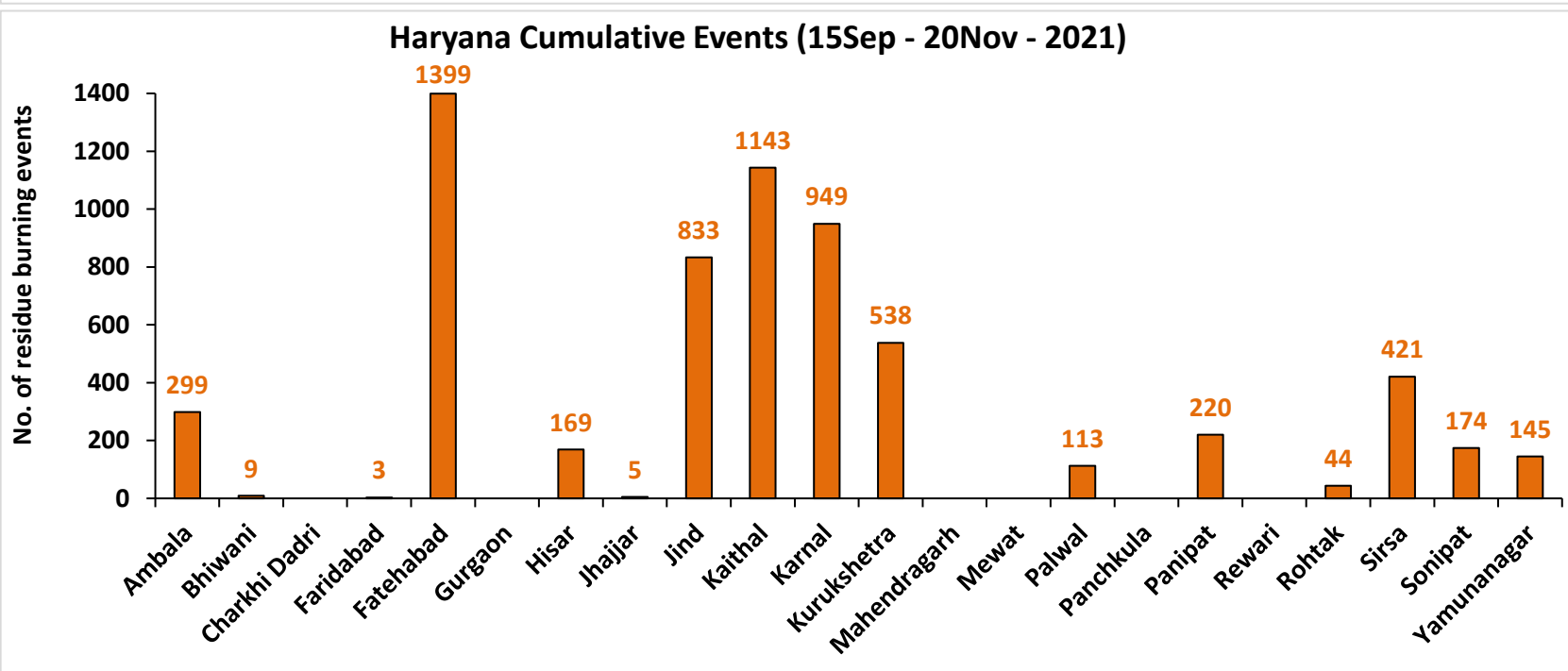
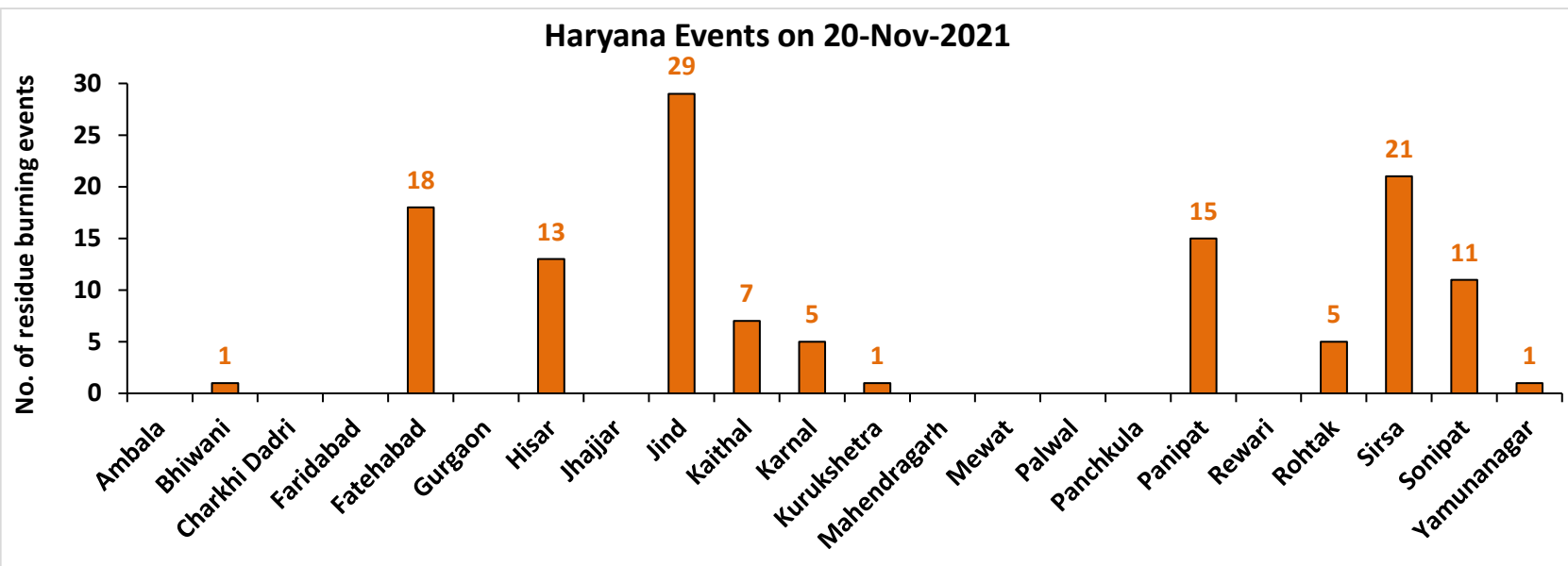
### Fire Intensity (W/m<sup>2</sup>)

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



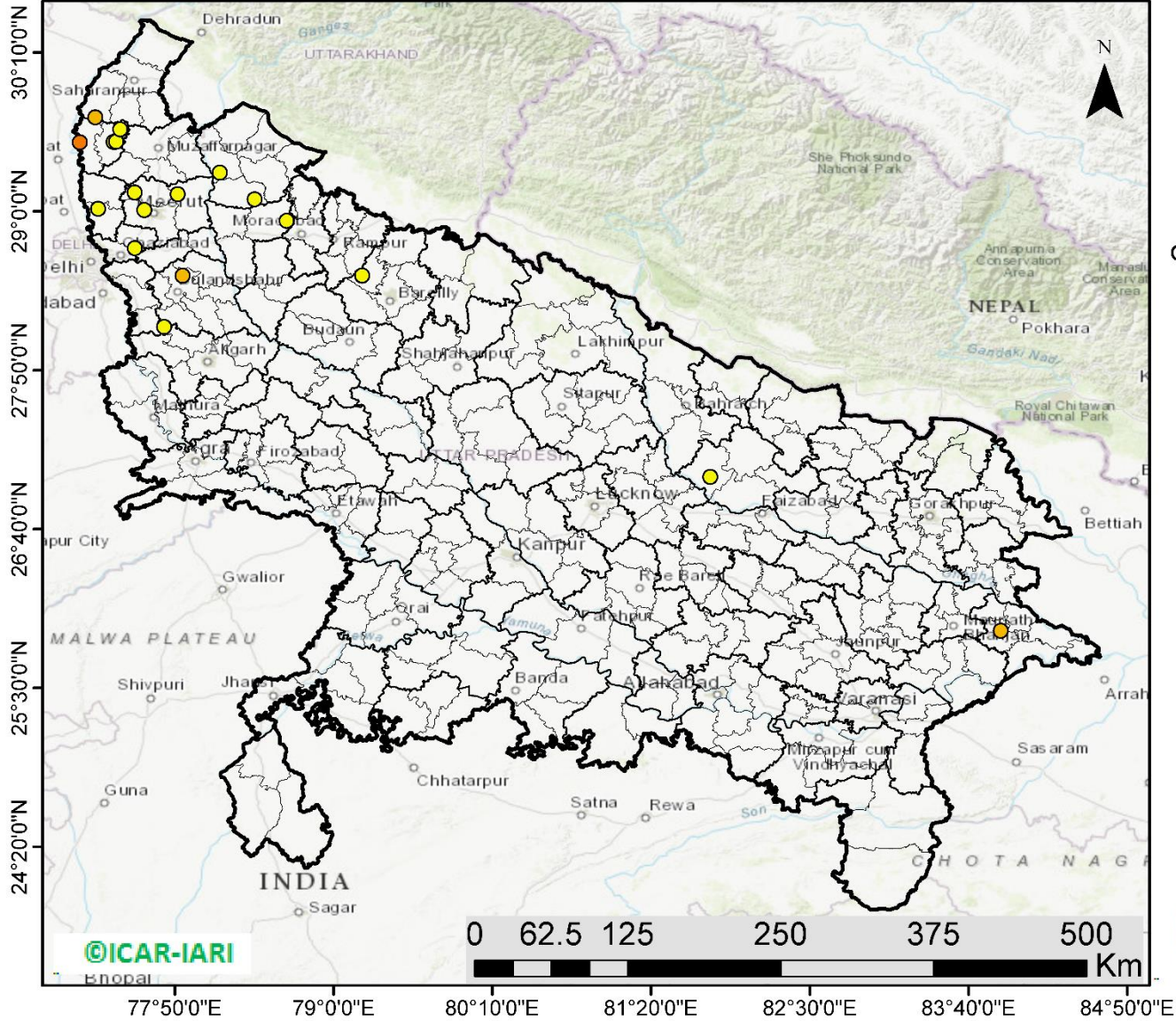
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

## District-wise cumulative number of residues burning events in Haryana (15 Sep - 20 Nov-2021)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



20 burning events detected in Uttar Pradesh on 20th November 2021

Fire Intensity (W/m2)

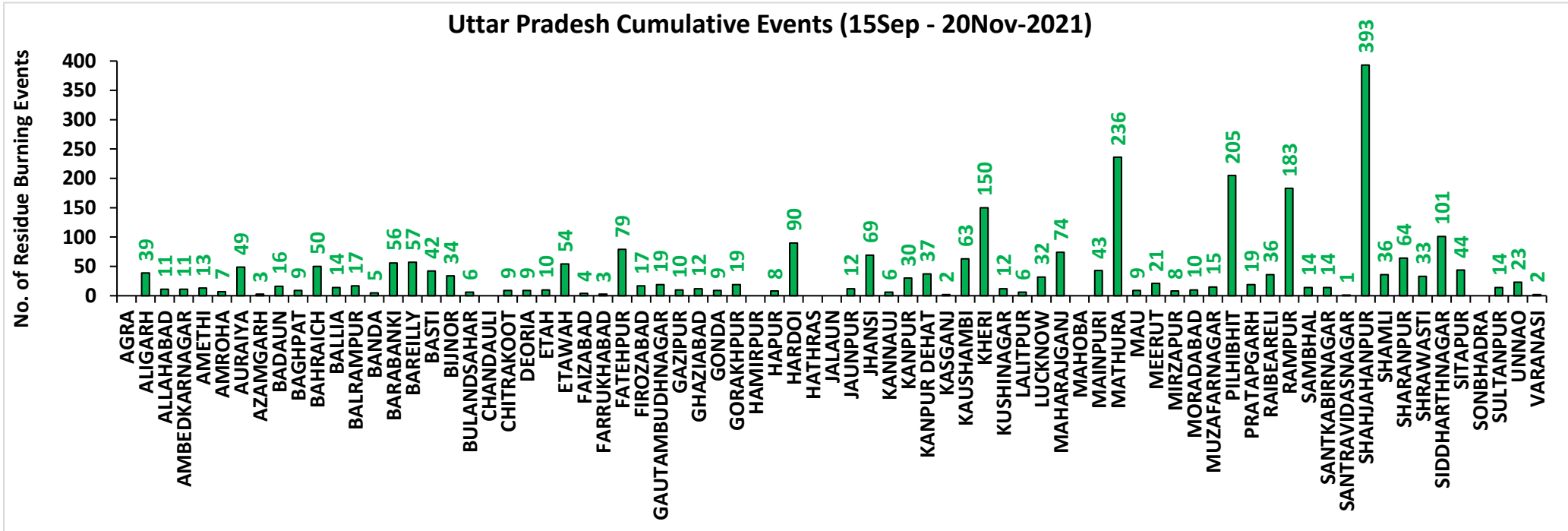
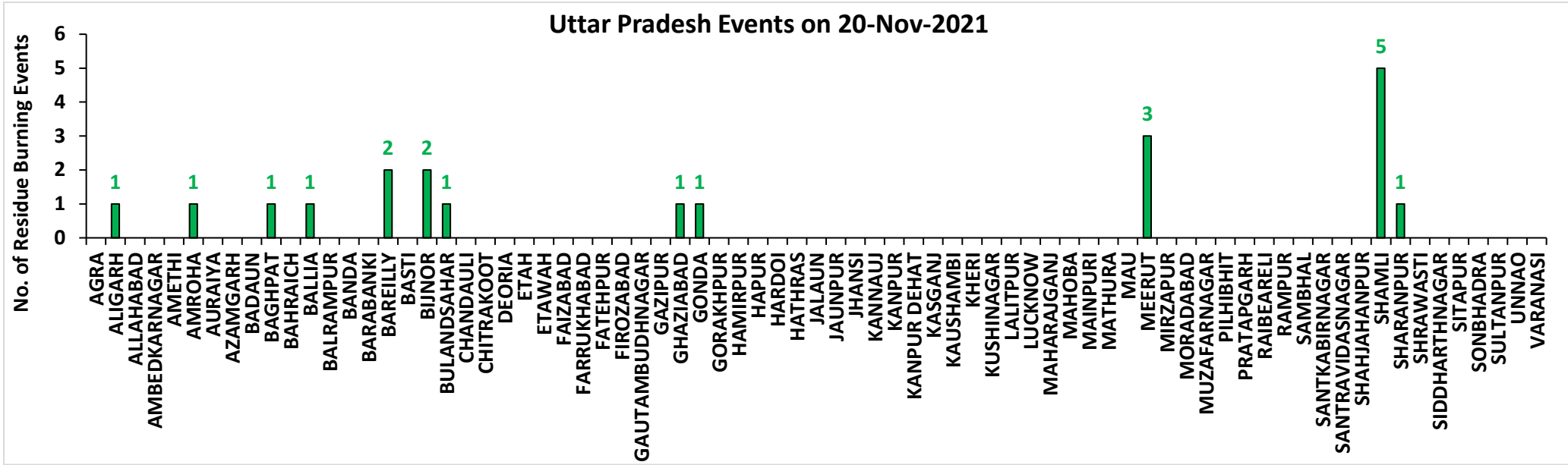
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20



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

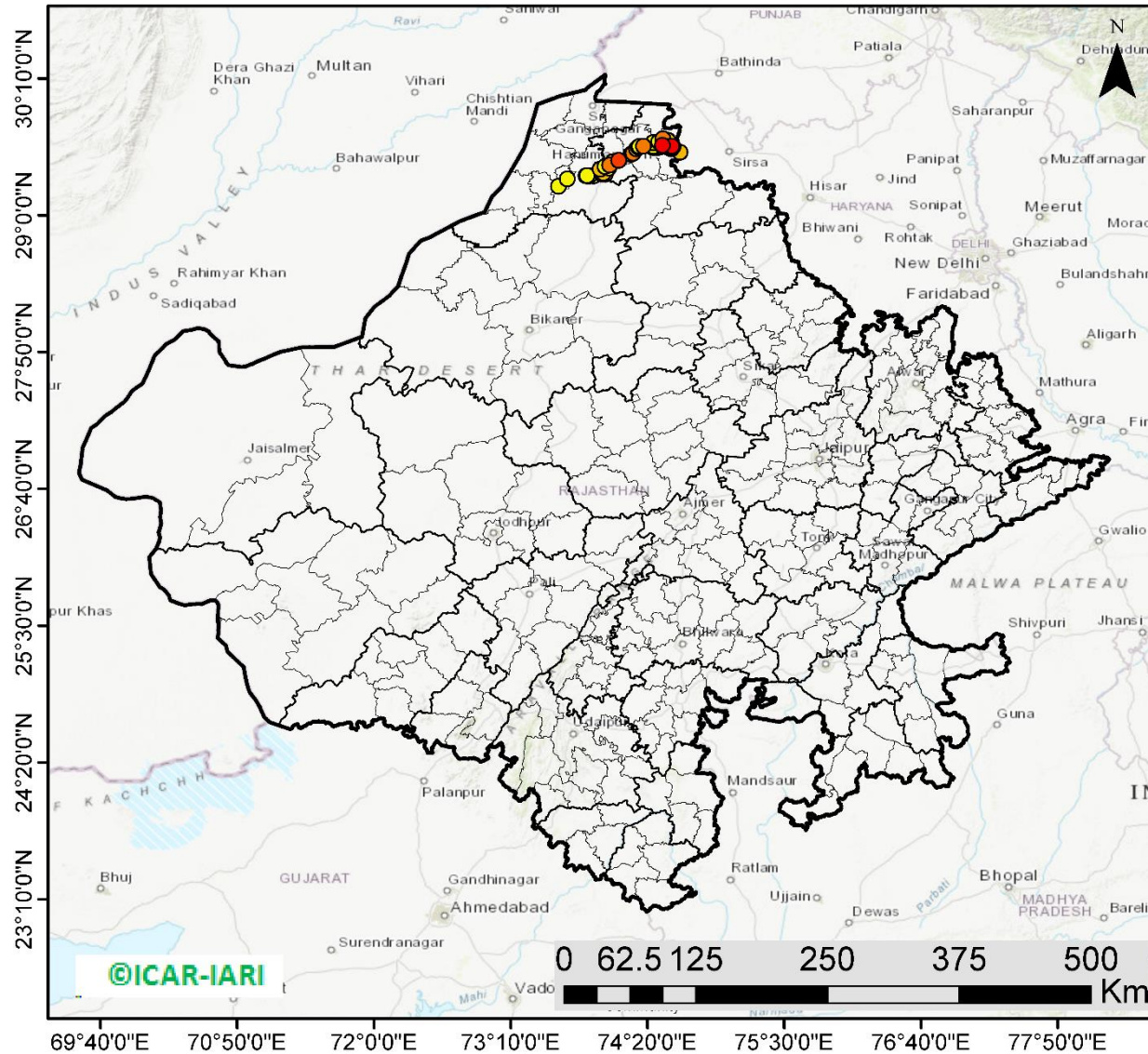


## District-wise cumulative number of residues burning events in Uttar Pradesh (15 Sep - 20 Nov-2021)



# Rajasthan

## RICE RESIDUE BURNING IN RAJASTHAN



**53** burning events detected in Rajasthan on **20th November 2021**

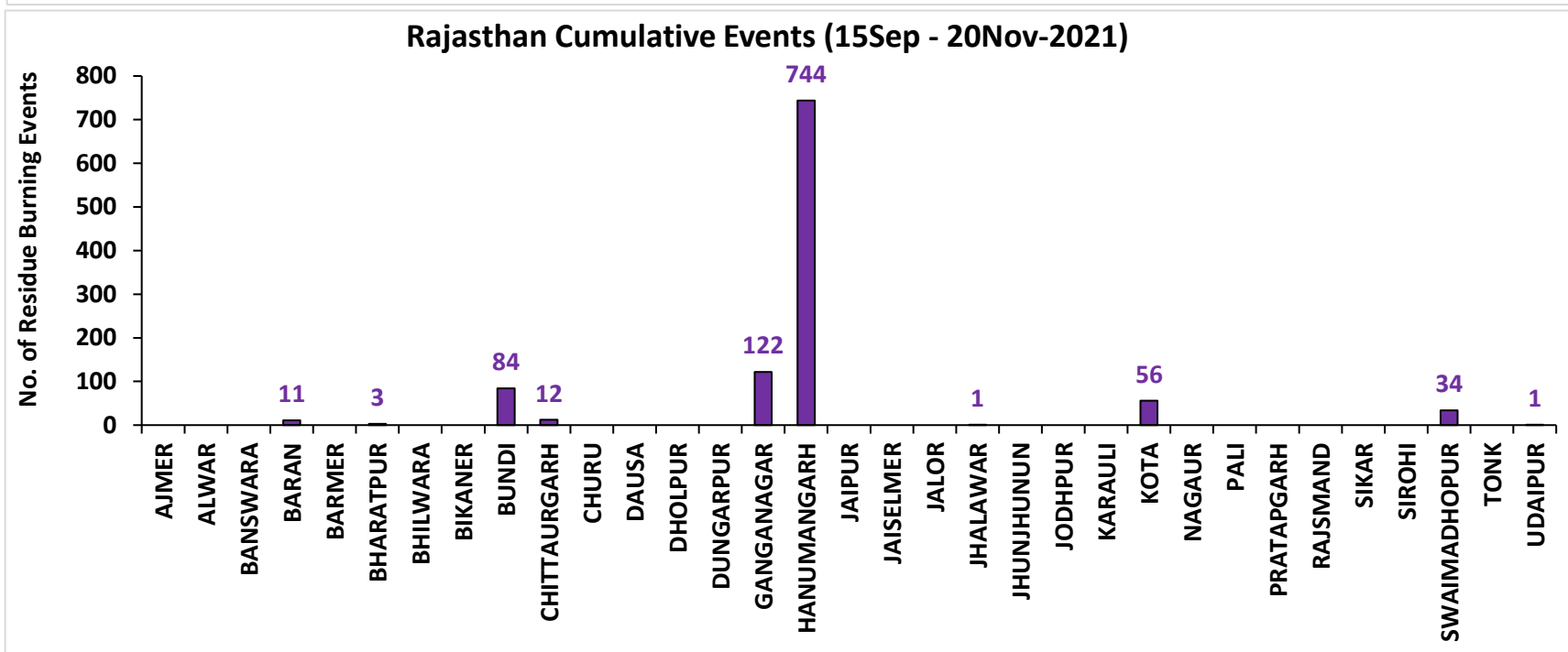
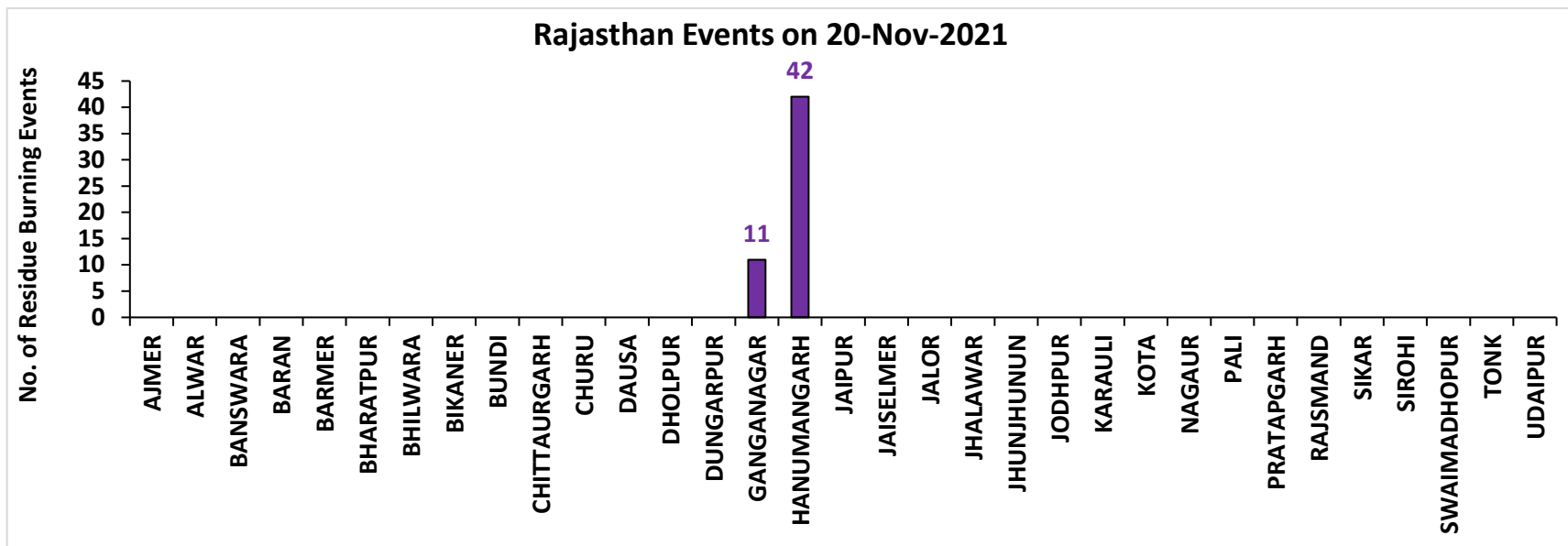
### Fire Intensity (W/m<sup>2</sup>)

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



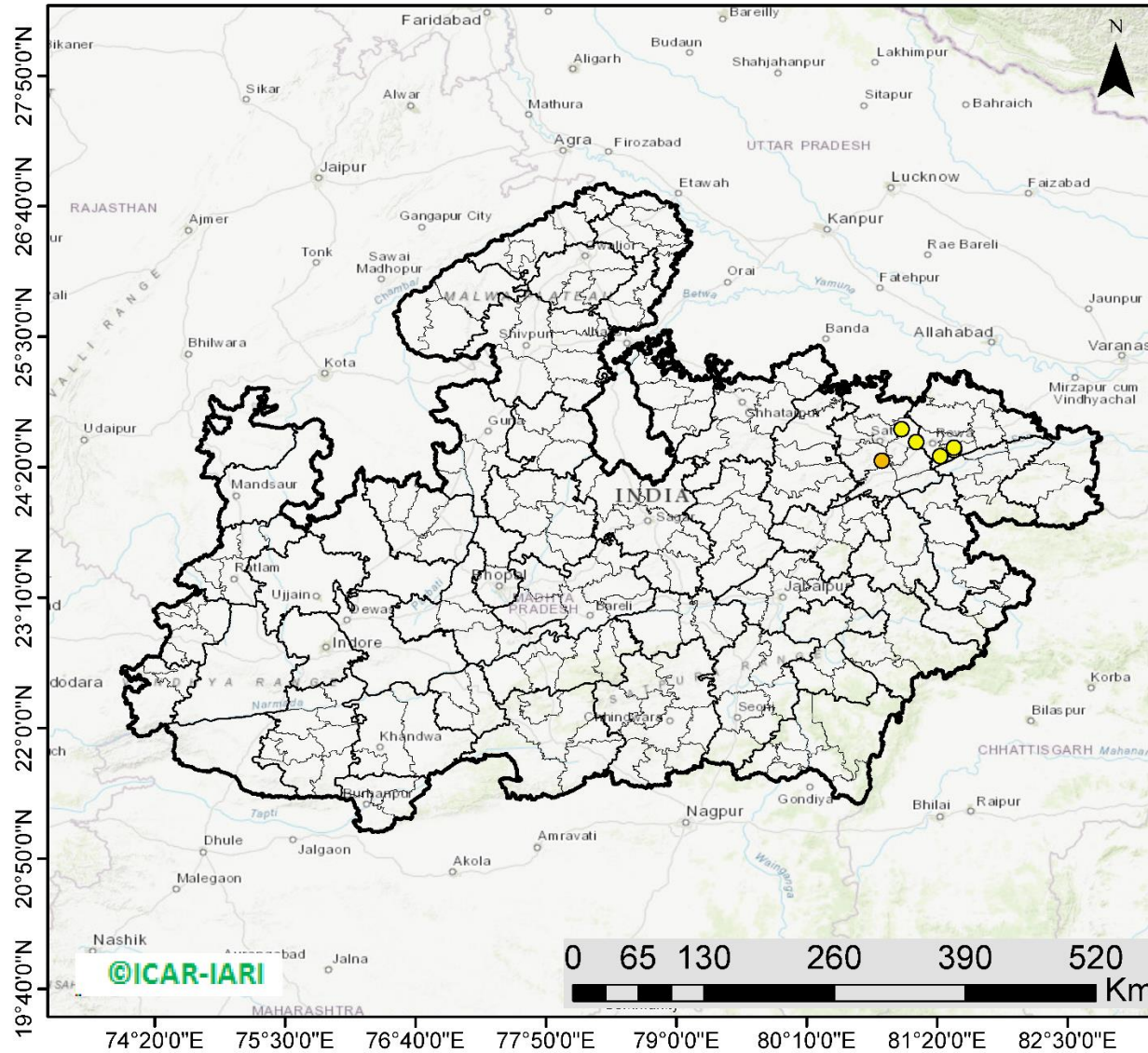
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

## District-wise cumulative number of residues burning events in Rajasthan (15 Sep - 20 Nov-2021)



# Madhya Pradesh

## RICE RESIDUE BURNING IN MADHYA PRADESH



**06** burning events detected in MP on 20th November 2021

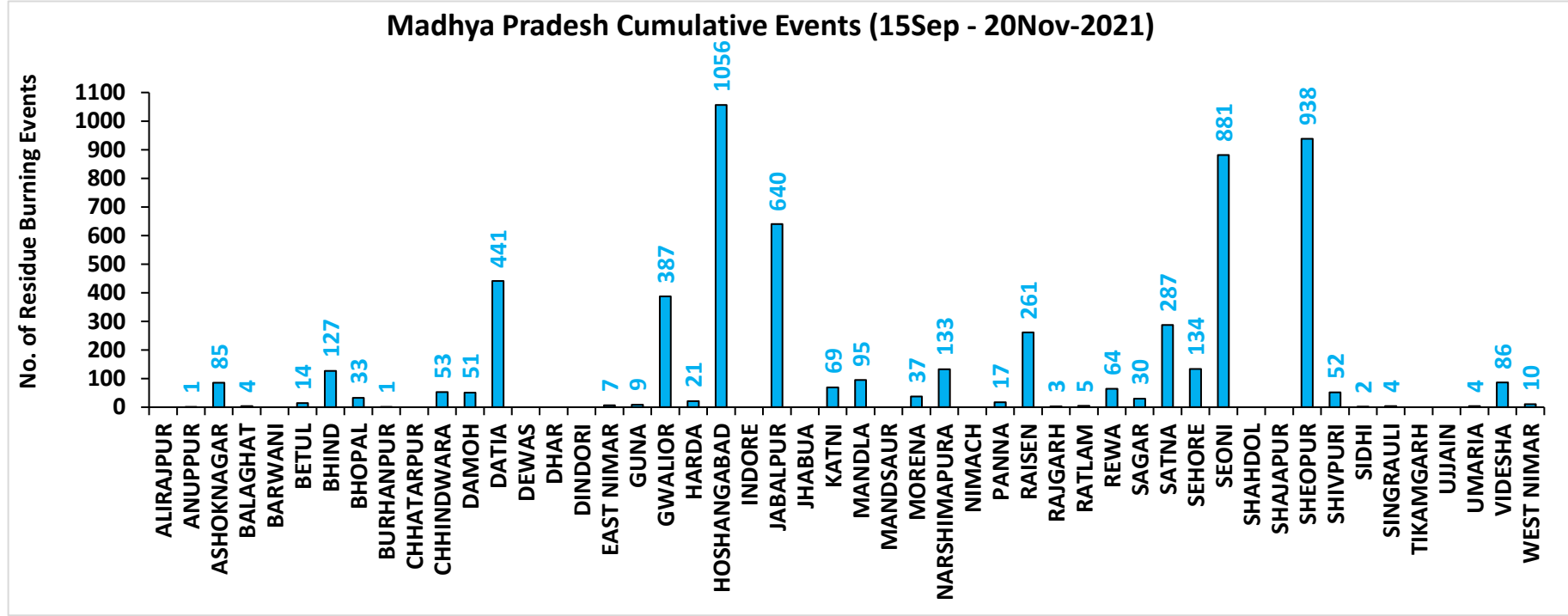
### Fire Intensity (W/m<sup>2</sup>)

- 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 (15 Sep - 20 Nov-2021)



**District-wise cumulative number of residues burning events detected in 2020 and 2021**  
**(Period: 15 September - 20 November)**

**(a) Punjab**

District	15 Sep – 20 Nov	
	2020	2021
AMRITSAR	3059	2162
BARNALA	5304	4314
BATHINDA	5184	4461
FARIDKOT	4703	3938
FATEHGARH SAHIB	1532	1715
FAZILKA	2381	2311
FIROZPUR	8459	6255
GURDASPUR	2122	1390
HOSHIARPUR	386	327
JALANDHAR	1933	2540
KAPURTHALA	1881	1791
LUDHIANA	5023	5794
MANSA	3756	3172
MOGA	7342	6491
MUKTSAR	4883	4501
PATHANKOT	13	6
PATIALA	6416	5395
RUPNAGAR	205	306
SANGRUR	11707	9374
SAS NAGAR (MOHALI)	127	147
SBS NAGAR	131	353
TARN TARAN	5600	4113
<b>Total</b>	<b>82147</b>	<b>70856</b>

**(b) Haryana**

District	15 Sep – 20 Nov	
	2020	2021
AMBALA	345	299
BHIWANI	4	9
CHARKHI DADRI	0	0
FARIDABAD	1	3
FATEHABAD	795	1399
GURGAON	0	0
HISAR	49	169
JHAJJAR	6	5
JIND	336	833
KAITHAL	831	1143
KARNAL	578	949
KURUKSHETRA	405	538
MAHENDRAGARH	0	0
MEWAT	0	0
PALWAL	46	113
PANCHKULA	0	0
PANIPAT	48	220
REWARI	0	0
ROHTAK	45	44
SIRSA	187	421
SONIPAT	66	174
YAMUNANAGAR	142	145
<b>Total</b>	<b>3884</b>	<b>6464</b>

(c) Uttar Pradesh

District	15 Sep – 20 Nov							
	2020	2021	GAUTAMBUDHNAGAR	14	19	MUZAFARNAGAR	40	15
AGRA	7	0	GAZIPUR	10	10	PILHIBHIT	16	205
ALIGARH	112	39	GHAZIABAD	20	12	PRATAPGARH	31	19
ALLAHABAD	25	11	GONDA	12	9	RAIBEARELI	15	36
AMBEDKARNAGAR	18	11	GORAKHPUR	40	19	RAMPUR	155	183
AMETHI	3	13	HAMIRPUR	4	0	SAMBHAL	18	14
AMROHA	11	7	HAPUR	23	8	SANTKABIRNAGAR	26	14
AURAIYA	76	49	HARDOI	93	90	SANTRAVIDASNAGAR	4	1
AZAMGARH	41	3	HATHRAS	0	0	SHAHJAHANPUR	125	393
BADAUN	13	16	JALAUN	37	0	SHAMLI	46	36
BAGHPAT	16	9	JAUNPUR	35	12	SHARANPUR	93	64
BAHRAICH	105	50	JHANSI	255	69	SHRAWASTI	45	33
BALLIA	62	14	KANNAUJ	31	6	SIDDHARTHANAGAR	66	101
BALRAMPUR	64	17	KANPUR	27	30	SITAPUR	51	44
BANDA	19	5	KANPUR DEHAT	70	37	SONBHADRA	0	0
BARABANKI	33	56	KASGANJ	2	2	SULTANPUR	4	14
BAREILLY	70	57	KAUSHAMBI	54	63	UNNAO	40	23
BASTI	51	42	KHERI	141	150	VARANASI	1	2
BIJNOR	34	34	KUSHINAGAR	65	12	<b>Total</b>	<b>3268</b>	<b>2808</b>
BULANDSAHAR	51	6	LALITPUR	3	6			
CHANDAULI	3	0	LUCKNOW	35	32			
CHITRAKOOT	12	9	MAHARAJGANJ	44	74			
DEORIA	76	9	MAHOBA	27	0			
ETAH	17	10	MAINPURI	60	43			
ETAWAH	65	54	MATHURA	159	236			
FAIZABAD	9	4	MAU	17	9			
FARRUKHABAD	5	3	MEERUT	54	21			
FATEHPUR	106	79	MIRZAPUR	7	8			
FIROZABAD	26	17	MORADABAD	23	10			

**(d) Delhi**

District	15 Sep – 20 Nov	
	2020	2021
CENTRAL	0	0
EAST	0	0
NEW DELHI	0	0
NORTH	3	3
NORTH EAST	0	0
NORTH WEST DELHI	3	1
SHAHADRA	0	0
SOUTH	1	0
SOUTH EAST	0	0
SOUTH WEST DELHI	0	0
WEST DELHI	2	0
<b>Total</b>	<b>9</b>	<b>4</b>

**(e) Rajasthan**

District	15 Sep – 20 Nov	
	2020	2021
AJMER	3	0
ALWAR	9	0
BANSWARA	0	0
BARAN	166	11
BARMER	4	0
BHARATPUR	2	3
BHILWARA	11	0
BIKANER	1	0
BUNDI	128	84
CHITTAURGARH	1	12
CHURU	0	0
DAUSA	1	0
DHOLPUR	0	0
DUNGARPUR	0	0
GANGANAGAR	173	122
HANUMANGARH	782	744
JAIPUR	4	0
JAISELMER	5	0
JALOR	2	0
JHALAWAR	9	1
JHUNJHUNUN	1	0
JODHPUR	5	0
KARALI	1	0
KOTA	116	56
NAGPUR	3	0
PALI	9	0
PRATAPGARH	8	0
RAJSMAND	1	0
SIKAR	0	0
SIROHI	2	0
SWAIMADHOPUR	65	34
TONK	5	0
UDAIPUR	2	1
<b>Total</b>	<b>1519</b>	<b>1068</b>



(f) Madhya Pradesh

District	15 Sep – 20 Nov				
	2020	2021			
			PANNA	49	17
ALIRAJPUR	0	0	RAISEN	585	261
ANUPPUR	0	1	RAJGARH	10	3
ASHOKNAGAR	152	85	RATLAM	3	5
BALAGHAT	5	4	REWA	124	64
BARWANI	3	0	SAGAR	28	30
BETUL	36	14	SATNA	544	287
BHIND	251	127	SEHORE	150	134
BHOPAL	49	33	SEONI	1228	881
BURHANPUR	15	1	SHAHDOL	3	0
CHHATARPUR	7	0	SHAJAPUR	17	0
CHHINDWARA	127	53	SHEOPUR	1803	938
DAMOH	73	51	SHIVPURI	346	52
DATIA	1178	441	SIDHI	4	2
DEWAS	8	0	SINGRAULI	0	4
DHAR	43	0	TIKAMGARH	4	0
DINDORI	0	0	UJJAIN	10	0
EAST NIMAR	22	7	UMARIA	7	4
GUNA	67	9	VIDESHA	133	86
GWALIOR	1962	387	WEST NIMAR	61	10
HARDA	14	21	<b>Total</b>	<b>13061</b>	<b>6042</b>
HOSHANGABAD	1056	1056			
INDORE	4	0			
JABALPUR	2107	640			
JHABUA	0	0			
KATNI	290	69			
MANDLA	141	95			
MANDSAUR	12	0			
MORENA	62	37			
NARSHIMAPURA	266	133			
NIMACH	2	0			

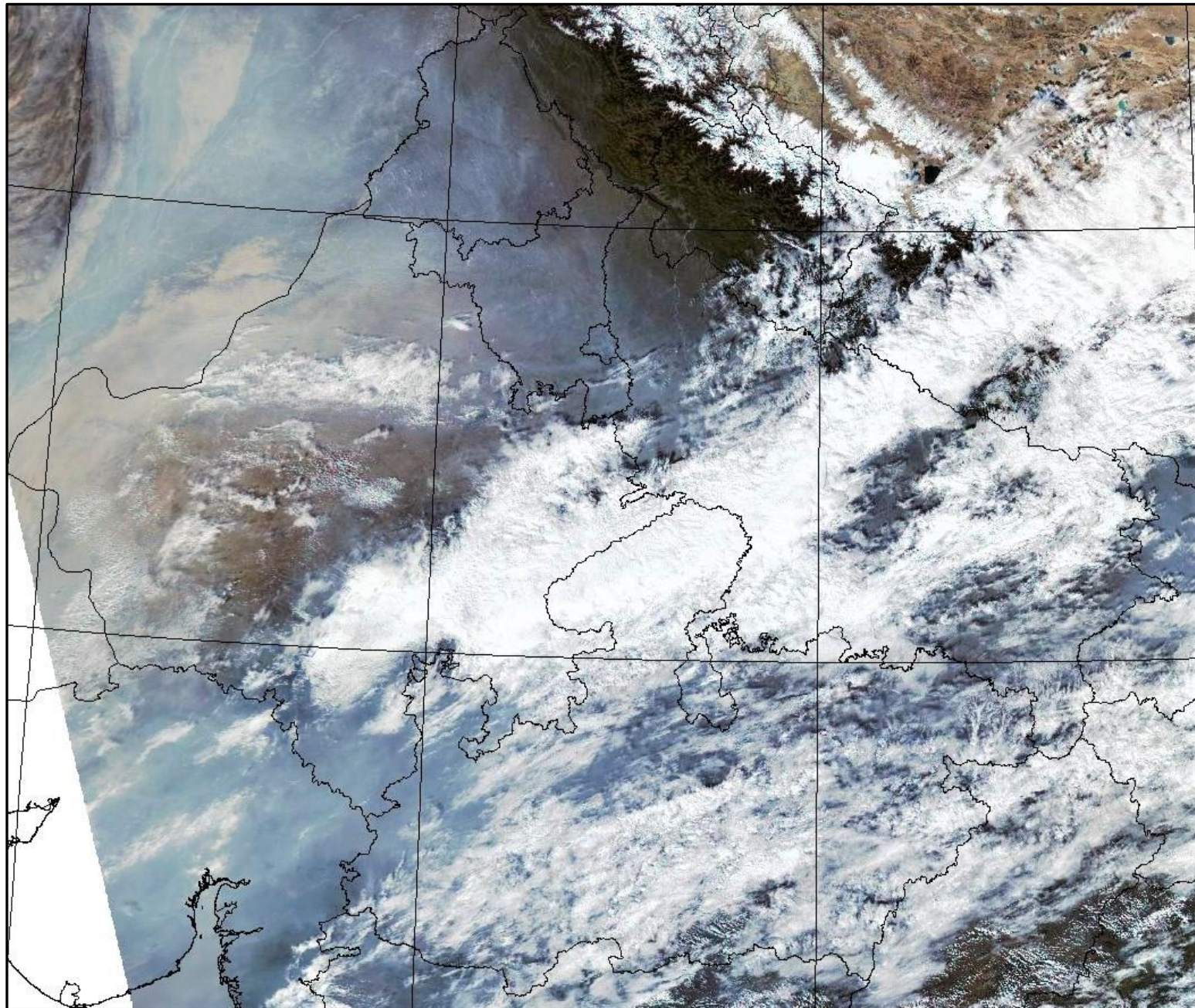
**State-wise and date-wise number of paddy residue burning events detected in 2020 and 2021**  
**(Period: 15 September – 20 November)**

<b>Number of Paddy Residue Burning Events Detected</b>												
	<b>Punjab</b>		<b>Haryana</b>		<b>Uttar Pradesh</b>		<b>Delhi</b>		<b>Rajasthan</b>		<b>Madhya Pradesh</b>	
	<b>2020</b>	<b>2021</b>	<b>2020</b>	<b>2021</b>	<b>2020</b>	<b>2021</b>	<b>2020</b>	<b>2021</b>	<b>2020</b>	<b>2021</b>	<b>2020</b>	<b>2021</b>
<b>15-Sep</b>	5	0	2	0	1	0	0	0	1	0	2	0
<b>16-Sep</b>	0	2	1	0	0	0	0	0	0	0	0	0
<b>17-Sep</b>	5	0	3	0	0	0	0	0	0	0	0	0
<b>18-Sep</b>	17	9	0	0	0	1	0	0	0	0	0	0
<b>19-Sep</b>	30	5	2	0	0	1	0	0	0	0	0	0
<b>20-Sep</b>	67	8	6	0	2	0	0	0	0	0	0	0
<b>21-Sep</b>	54	0	2	0	1	0	0	0	1	0	2	0
<b>22-Sep</b>	34	0	1	0	1	0	0	0	0	0	0	0
<b>23-Sep</b>	49	0	0	0	1	0	0	0	1	0	0	0
<b>24-Sep</b>	78	5	0	0	1	1	0	0	0	0	0	0
<b>25-Sep</b>	184	11	11	0	5	0	0	0	1	0	0	0
<b>26-Sep</b>	190	19	5	0	8	0	0	0	1	0	2	0
<b>27-Sep</b>	78	37	8	0	4	1	0	0	0	0	1	0
<b>28-Sep</b>	55	28	6	1	1	6	0	0	0	0	1	1
<b>29-Sep</b>	63	64	9	4	6	10	0	0	3	0	0	4
<b>30-Sep</b>	116	27	22	2	13	13	1	0	1	0	5	0
<b>01-Oct</b>	165	13	15	4	7	13	0	0	4	1	13	0
<b>02-Oct</b>	141	0	30	2	12	0	1	0	7	0	12	0
<b>03-Oct</b>	110	9	8	6	4	3	0	0	9	0	5	1
<b>04-Oct</b>	162	23	29	2	8	0	0	0	15	0	4	2
<b>05-Oct</b>	161	18	17	3	14	2	0	0	14	0	13	1
<b>06-Oct</b>	171	42	30	0	12	1	1	0	16	0	37	1
<b>07-Oct</b>	197	72	32	11	41	13	0	0	14	1	31	1
<b>08-Oct</b>	95	108	29	27	25	11	0	0	11	0	17	2
<b>09-Oct</b>	121	114	20	39	15	20	0	0	12	0	15	4
<b>10-Oct</b>	232	150	33	95	9	54	0	0	14	1	18	10
<b>11-Oct</b>	377	64	90	51	23	28	0	0	21	7	32	2

<b>12-Oct</b>	388	97	69	51	46	23	0	0	24	1	44	1
<b>13-Oct</b>	266	132	47	91	36	42	0	0	7	5	21	2
<b>14-Oct</b>	605	229	69	98	9	68	0	0	16	1	15	11
<b>15-Oct</b>	449	660	106	363	15	149	0	0	9	8	8	27
<b>16-Oct</b>	654	429	80	176	21	121	1	0	12	2	23	13
<b>17-Oct</b>	1172	14	143	0	38	39	0	0	26	0	63	1
<b>18-Oct</b>	938	57	166	1	76	0	0	0	37	2	88	0
<b>19-Oct</b>	1080	496	72	55	43	5	0	0	27	5	49	1
<b>20-Oct</b>	890	788	62	155	31	1	0	0	26	4	9	21
<b>21-Oct</b>	1392	597	101	131	25	5	2	0	32	2	112	30
<b>22-Oct</b>	1665	1111	128	140	32	3	0	0	29	5	183	29
<b>23-Oct</b>	1438	620	106	218	84	8	1	0	23	7	204	32
<b>24-Oct</b>	911	0	57	38	63	11	0	0	20	4	150	34
<b>25-Oct</b>	1416	76	155	71	50	18	1	0	18	2	144	60
<b>26-Oct</b>	2126	329	77	175	33	41	0	0	34	3	178	55
<b>27-Oct</b>	2563	279	96	93	40	58	0	0	42	1	294	62
<b>28-Oct</b>	3232	906	139	149	87	35	0	0	45	4	537	110
<b>29-Oct</b>	1624	1353	52	161	139	32	0	0	29	23	349	97
<b>30-Oct</b>	3946	1373	100	148	50	53	0	0	17	20	428	168
<b>31-Oct</b>	3531	2895	108	353	49	170	0	0	37	15	455	299
<b>01-Nov</b>	3835	1796	151	124	74	157	0	0	51	5	709	198
<b>02-Nov</b>	4098	3001	111	203	82	87	0	0	55	19	820	214
<b>03-Nov</b>	2818	2512	93	197	197	66	1	0	34	20	771	148
<b>04-Nov</b>	4584	3032	72	228	152	123	0	0	46	19	618	123
<b>05-Nov</b>	4529	5327	66	331	52	70	0	0	46	45	474	320
<b>06-Nov</b>	5382	3942	151	219	43	208	0	0	40	32	678	248
<b>07-Nov</b>	5491	5199	150	182	86	46	0	0	57	38	848	199
<b>08-Nov</b>	3674	4397	115	138	169	21	0	0	33	44	981	170
<b>09-Nov</b>	1718	5079	21	217	115	51	0	1	34	48	495	330
<b>10-Nov</b>	3127	4008	80	184	101	77	0	0	48	40	346	380
<b>11-Nov</b>	2822	4156	93	126	71	151	0	1	75	55	418	506
<b>12-Nov</b>	1989	3403	83	127	108	120	0	0	31	40	422	185
<b>13-Nov</b>	2441	3742	105	210	172	95	0	2	54	78	670	171
<b>14-Nov</b>	307	2541	35	195	258	49	0	0	16	88	294	346
<b>15-Nov</b>	32	1761	31	129	29	67	0	0	6	51	35	353
<b>16-Nov</b>	8	1757	0	269	15	138	0	0	16	81	145	660

<b>17-Nov</b>	248	523	9	101	38	177	0	0	60	38	191	261
<b>18-Nov</b>	670	680	60	111	62	14	0	0	75	77	352	126
<b>19-Nov</b>	454	448	37	132	129	11	0	0	27	73	124	16
<b>20-Nov</b>	677	283	77	127	134	20	0	0	59	53	106	6
<b>Total</b>	<b>82147</b>	<b>70856</b>	<b>3884</b>	<b>6464</b>	<b>3268</b>	<b>2808</b>	<b>9</b>	<b>4</b>	<b>1519</b>	<b>1068</b>	<b>13061</b>	<b>6042</b>

[AQUA \(MODIS\) Satellite image \(TCC\) of North and Central India Acquired on 20-Nov-2021 at 13:17:00 IST by IARI Ground Station](#)



### Details of residue burning events in Punjab on 20-Nov-2021

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m <sup>2</sup> )
1	AMRITSAR	ATTARI	S-NPP	31.57050	74.63920	11/20/2021	13:48:56	D	2.40
2	AMRITSAR	ATTARI	S-NPP	31.58490	74.63150	11/20/2021	13:48:56	D	8.50
3	AMRITSAR	ATTARI	S-NPP	31.59350	74.67310	11/20/2021	13:48:56	D	2.40
4	AMRITSAR	ATTARI	AQUA	31.58300	74.61900	11/20/2021	13:20:10	D	12.30
5	AMRITSAR	ATTARI	AQUA	31.58600	74.63600	11/20/2021	13:20:10	D	12.70
6	BARNALA	BARNALA	S-NPP	30.31120	75.46110	11/20/2021	13:48:56	D	7.40
7	BARNALA	BARNALA	S-NPP	30.36520	75.62270	11/20/2021	13:48:56	D	3.20
8	BATHINDA	BATHINDA	S-NPP	30.10180	74.97970	11/20/2021	13:48:56	D	4.40
9	BATHINDA	MAUR	S-NPP	30.06480	75.15310	11/20/2021	13:48:56	D	3.50
10	BATHINDA	MAUR	S-NPP	30.12360	75.16810	11/20/2021	13:48:56	D	4.70
11	BATHINDA	NATHANA	S-NPP	30.37100	75.15190	11/20/2021	13:48:56	D	8.10
12	BATHINDA	NATHANA	S-NPP	30.41010	75.09180	11/20/2021	13:48:56	D	3.00
13	BATHINDA	PHUL	S-NPP	30.31530	75.13080	11/20/2021	13:48:56	D	10.80
14	BATHINDA	PHUL	S-NPP	30.32290	75.19460	11/20/2021	13:48:56	D	5.30
15	BATHINDA	PHUL	S-NPP	30.32730	75.19940	11/20/2021	13:48:56	D	5.30
16	BATHINDA	PHUL	S-NPP	30.34930	75.19870	11/20/2021	13:48:56	D	8.00
17	BATHINDA	SANGAT	S-NPP	30.01440	74.79310	11/20/2021	13:48:56	D	13.70
18	BATHINDA	SANGAT	S-NPP	30.13150	74.75100	11/20/2021	13:48:56	D	1.90
19	BATHINDA	SANGAT	S-NPP	30.13710	74.64250	11/20/2021	13:48:56	D	3.00
20	BATHINDA	SANGAT	AQUA	29.97300	74.77700	11/20/2021	13:20:10	D	12.70
21	BATHINDA	SANGAT	AQUA	30.12300	74.65000	11/20/2021	13:20:10	D	35.90
22	BATHINDA	TALWANDI SABO	S-NPP	29.98780	75.11850	11/20/2021	13:48:56	D	5.90
23	BATHINDA	TALWANDI SABO	S-NPP	30.00850	75.09770	11/20/2021	13:48:56	D	14.70
24	BATHINDA	TALWANDI SABO	S-NPP	30.00850	75.09940	11/20/2021	13:48:56	D	45.60
25	BATHINDA	TALWANDI SABO	S-NPP	30.00910	75.10300	11/20/2021	13:48:56	D	14.70
26	BATHINDA	TALWANDI SABO	S-NPP	30.01360	75.07570	11/20/2021	13:48:56	D	3.70
27	BATHINDA	TALWANDI SABO	S-NPP	30.02280	74.92670	11/20/2021	13:48:56	D	5.20
28	BATHINDA	TALWANDI SABO	S-NPP	30.02710	74.93130	11/20/2021	13:48:56	D	5.20
29	FARIDKOT	FARIDKOT	S-NPP	30.59830	74.68230	11/20/2021	13:48:56	D	5.00

30	FARIDKOT	FARIDKOT	S-NPP	30.60010	74.68450	11/20/2021	13:48:56	D	4.00
31	FARIDKOT	FARIDKOT	S-NPP	30.70830	74.67260	11/20/2021	13:48:56	D	2.40
32	FARIDKOT	FARIDKOT	S-NPP	30.71340	74.71350	11/20/2021	13:48:56	D	2.20
33	FARIDKOT	FARIDKOT	S-NPP	30.71510	74.49790	11/20/2021	13:48:56	D	12.60
34	FARIDKOT	FARIDKOT	S-NPP	30.72170	74.90780	11/20/2021	13:48:56	D	5.80
35	FARIDKOT	FARIDKOT	S-NPP	30.72620	74.49620	11/20/2021	13:48:56	D	5.00
36	FARIDKOT	JAITON	S-NPP	30.42130	74.89810	11/20/2021	13:48:56	D	1.70
37	FARIDKOT	JAITON	AQUA	30.41300	74.89200	11/20/2021	13:20:10	D	21.60
38	FARIDKOT	JAITON	AQUA	30.41600	74.89900	11/20/2021	13:20:10	D	19.20
39	FATEHGARH SAHIB	AMLOH	S-NPP	30.62300	76.18890	11/20/2021	13:48:56	D	7.80
40	FATEHGARH SAHIB	AMLOH	AQUA	30.57300	76.12300	11/20/2021	13:20:10	D	35.80
41	FATEHGARH SAHIB	AMLOH	AQUA	30.57600	76.13700	11/20/2021	13:20:10	D	80.20
42	FATEHGARH SAHIB	KHERA	S-NPP	30.62710	76.57590	11/20/2021	13:48:56	D	2.90
43	FATEHGARH SAHIB	SIRHIND	S-NPP	30.49950	76.34280	11/20/2021	13:48:56	D	11.10
44	FATEHGARH SAHIB	SIRHIND	S-NPP	30.50800	76.38340	11/20/2021	13:48:56	D	4.80
45	FATEHGARH SAHIB	SIRHIND	S-NPP	30.53290	76.34640	11/20/2021	13:48:56	D	3.10
46	FATEHGARH SAHIB	SIRHIND	S-NPP	30.56120	76.30490	11/20/2021	13:48:56	D	1.40
47	FATEHGARH SAHIB	SIRHIND	S-NPP	30.56480	76.30020	11/20/2021	13:48:56	D	8.60
48	FATEHGARH SAHIB	SIRHIND	S-NPP	30.56530	76.30430	11/20/2021	13:48:56	D	15.50
49	FATEHGARH SAHIB	SIRHIND	S-NPP	30.59530	76.31300	11/20/2021	13:48:56	D	2.70
50	FATEHGARH SAHIB	SIRHIND	AQUA	30.49200	76.46700	11/20/2021	13:20:10	D	8.50
51	FATEHGARH SAHIB	SIRHIND	AQUA	30.49300	76.34900	11/20/2021	13:20:10	D	63.30
52	FATEHGARH SAHIB	SIRHIND	AQUA	30.49900	76.34100	11/20/2021	13:20:10	D	38.90

53	FATEHGARH SAHIB	SIRHIND	AQUA	30.50700	76.38400	11/20/2021	13:20:10	D	15.90
54	FATEHGARH SAHIB	SIRHIND	TERRA	30.60200	76.42700	11/20/2021	11:44:47	D	22.90
55	FAZILKA	ABOHAR	S-NPP	30.11330	74.36030	11/20/2021	13:48:56	D	9.40
56	FAZILKA	ABOHAR	S-NPP	30.19920	74.33350	11/20/2021	13:48:56	D	4.70
57	FAZILKA	ABOHAR	S-NPP	30.20050	74.31350	11/20/2021	13:48:56	D	2.80
58	FAZILKA	ARNIWALA SHEIKH SUBANPUR	S-NPP	30.41420	74.15440	11/20/2021	13:48:56	D	7.90
59	FAZILKA	ARNIWALA SHEIKH SUBANPUR	AQUA	30.40300	74.17700	11/20/2021	13:20:10	D	12.30
60	FAZILKA	FAZILKA	S-NPP	30.35720	73.93600	11/20/2021	13:48:56	D	5.60
61	FAZILKA	FAZILKA	S-NPP	30.35780	73.94070	11/20/2021	13:48:56	D	7.50
62	FAZILKA	FAZILKA	S-NPP	30.38880	73.92590	11/20/2021	13:48:56	D	2.50
63	FAZILKA	FAZILKA	S-NPP	30.39910	74.09340	11/20/2021	13:48:56	D	8.10
64	FAZILKA	FAZILKA	S-NPP	30.40670	73.95180	11/20/2021	13:48:56	D	3.10
65	FAZILKA	FAZILKA	S-NPP	30.41410	74.06660	11/20/2021	13:48:56	D	2.70
66	FAZILKA	FAZILKA	S-NPP	30.47630	74.11730	11/20/2021	13:48:56	D	8.00
67	FAZILKA	FAZILKA	S-NPP	30.48830	73.97910	11/20/2021	13:48:56	D	2.40
68	FAZILKA	FAZILKA	S-NPP	30.50450	73.99090	11/20/2021	13:48:56	D	4.20
69	FAZILKA	FAZILKA	S-NPP	30.50750	74.04380	11/20/2021	13:48:56	D	3.10
70	FAZILKA	FAZILKA	AQUA	30.31300	74.06200	11/20/2021	13:20:10	D	17.80
71	FAZILKA	FAZILKA	AQUA	30.36800	74.00000	11/20/2021	13:20:10	D	16.50
72	FAZILKA	FAZILKA	AQUA	30.41500	73.95900	11/20/2021	13:20:10	D	20.30
73	FAZILKA	FAZILKA	AQUA	30.47500	74.06800	11/20/2021	13:20:10	D	21.40
74	FAZILKA	JALALABAD	S-NPP	30.46460	74.26220	11/20/2021	13:48:56	D	4.30
75	FAZILKA	JALALABAD	S-NPP	30.48890	74.18890	11/20/2021	13:48:56	D	4.00
76	FAZILKA	JALALABAD	S-NPP	30.49540	74.33190	11/20/2021	13:48:56	D	13.70
77	FAZILKA	JALALABAD	S-NPP	30.49910	74.33130	11/20/2021	13:48:56	D	13.70
78	FAZILKA	JALALABAD	S-NPP	30.50520	74.23080	11/20/2021	13:48:56	D	6.80
79	FAZILKA	JALALABAD	S-NPP	30.50820	74.22530	11/20/2021	13:48:56	D	4.80
80	FAZILKA	JALALABAD	S-NPP	30.51180	74.22470	11/20/2021	13:48:56	D	8.80
81	FAZILKA	JALALABAD	S-NPP	30.51360	74.32890	11/20/2021	13:48:56	D	23.40
82	FAZILKA	JALALABAD	S-NPP	30.51670	74.20410	11/20/2021	13:48:56	D	4.10
83	FAZILKA	JALALABAD	S-NPP	30.51730	74.20900	11/20/2021	13:48:56	D	5.70



84	FAZILKA	JALALABAD	S-NPP	30.51790	74.33320	11/20/2021	13:48:56	D	16.30
85	FAZILKA	JALALABAD	S-NPP	30.52150	74.33260	11/20/2021	13:48:56	D	16.30
86	FAZILKA	JALALABAD	S-NPP	30.52460	74.32710	11/20/2021	13:48:56	D	18.00
87	FAZILKA	JALALABAD	S-NPP	30.52760	74.32170	11/20/2021	13:48:56	D	34.00
88	FAZILKA	JALALABAD	S-NPP	30.52820	74.32660	11/20/2021	13:48:56	D	18.00
89	FAZILKA	JALALABAD	S-NPP	30.52880	74.33150	11/20/2021	13:48:56	D	18.00
90	FAZILKA	JALALABAD	S-NPP	30.53000	74.34130	11/20/2021	13:48:56	D	12.70
91	FAZILKA	JALALABAD	S-NPP	30.53850	74.38010	11/20/2021	13:48:56	D	7.10
92	FAZILKA	JALALABAD	S-NPP	30.56430	74.19840	11/20/2021	13:48:56	D	16.50
93	FAZILKA	JALALABAD	S-NPP	30.57040	74.18750	11/20/2021	13:48:56	D	3.00
94	FAZILKA	JALALABAD	S-NPP	30.58070	74.18090	11/20/2021	13:48:56	D	2.70
95	FAZILKA	JALALABAD	S-NPP	30.59460	74.11450	11/20/2021	13:48:56	D	2.80
96	FAZILKA	JALALABAD	S-NPP	30.62110	74.20890	11/20/2021	13:48:56	D	2.90
97	FAZILKA	JALALABAD	S-NPP	30.62780	74.23270	11/20/2021	13:48:56	D	46.50
98	FAZILKA	JALALABAD	S-NPP	30.63690	74.21630	11/20/2021	13:48:56	D	9.00
99	FAZILKA	JALALABAD	S-NPP	30.63740	74.22120	11/20/2021	13:48:56	D	25.50
100	FAZILKA	JALALABAD	AQUA	30.44600	74.20600	11/20/2021	13:20:10	D	14.90
101	FAZILKA	JALALABAD	AQUA	30.52500	74.19800	11/20/2021	13:20:10	D	14.70
102	FAZILKA	JALALABAD	AQUA	30.53900	74.39400	11/20/2021	13:20:10	D	24.90
103	FAZILKA	KHUIAN SARWAR	S-NPP	30.25790	74.00350	11/20/2021	13:48:56	D	2.90
104	FAZILKA	KHUIAN SARWAR	S-NPP	30.26270	73.98350	11/20/2021	13:48:56	D	2.70
105	FIROZPUR	FIROZPUR	S-NPP	30.88600	74.58660	11/20/2021	13:48:56	D	7.90
106	FIROZPUR	FIROZPUR	S-NPP	31.04760	74.58730	11/20/2021	13:48:56	D	4.90
107	FIROZPUR	GHALL KHURD	S-NPP	30.81700	74.93830	11/20/2021	13:48:56	D	3.10
108	FIROZPUR	GHALL KHURD	AQUA	30.79600	74.82400	11/20/2021	13:20:10	D	21.30
109	FIROZPUR	GURUHAR SAHAI	S-NPP	30.58710	74.32420	11/20/2021	13:48:56	D	2.90
110	FIROZPUR	GURUHAR SAHAI	S-NPP	30.59540	74.39320	11/20/2021	13:48:56	D	2.10
111	FIROZPUR	GURUHAR SAHAI	S-NPP	30.60760	74.40140	11/20/2021	13:48:56	D	3.90
112	FIROZPUR	GURUHAR SAHAI	S-NPP	30.60820	74.40630	11/20/2021	13:48:56	D	4.90
113	FIROZPUR	GURUHAR SAHAI	S-NPP	30.61190	74.40570	11/20/2021	13:48:56	D	7.00
114	FIROZPUR	GURUHAR SAHAI	S-NPP	30.61250	74.41070	11/20/2021	13:48:56	D	7.00
115	FIROZPUR	GURUHAR SAHAI	S-NPP	30.61550	74.40520	11/20/2021	13:48:56	D	7.00
116	FIROZPUR	GURUHAR SAHAI	S-NPP	30.62230	74.39900	11/20/2021	13:48:56	D	6.50

117	FIROZPUR	GURUHAR SAHAI	S-NPP	30.62290	74.25340	11/20/2021	13:48:56	D	7.50
118	FIROZPUR	GURUHAR SAHAI	S-NPP	30.66760	74.25780	11/20/2021	13:48:56	D	3.40
119	FIROZPUR	GURUHAR SAHAI	S-NPP	30.66980	74.33090	11/20/2021	13:48:56	D	4.60
120	FIROZPUR	GURUHAR SAHAI	S-NPP	30.68990	74.31940	11/20/2021	13:48:56	D	2.20
121	FIROZPUR	ZIRA	S-NPP	31.02440	74.97750	11/20/2021	13:48:56	D	5.90
122	FIROZPUR	ZIRA	S-NPP	31.02570	74.92300	11/20/2021	13:48:56	D	11.70
123	GURDASPUR	DERA BABA NANAK	S-NPP	31.98180	74.98550	11/20/2021	13:48:56	D	3.70
124	JALANDHAR	NUR MAHAL	S-NPP	31.11460	75.58950	11/20/2021	13:48:56	D	3.90
125	JALANDHAR	NUR MAHAL	AQUA	31.12800	75.59800	11/20/2021	13:20:10	D	15.20
126	JALANDHAR	PHILLAUR	S-NPP	31.13820	75.83530	11/20/2021	13:48:56	D	3.90
127	JALANDHAR	PHILLAUR	S-NPP	31.13890	75.84120	11/20/2021	13:48:56	D	6.10
128	JALANDHAR	RURKA KALAN	AQUA	31.13100	75.61300	11/20/2021	13:20:10	D	20.90
129	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.20970	75.21210	11/20/2021	13:48:56	D	2.20
130	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.21070	75.20910	11/20/2021	13:48:56	D	9.50
131	LUDHIANA	DEHLON	S-NPP	30.80630	75.91300	11/20/2021	13:48:56	D	7.90
132	LUDHIANA	DEHLON	AQUA	30.73800	75.88500	11/20/2021	13:20:10	D	11.80
133	LUDHIANA	JAGRAON	S-NPP	30.77780	75.45000	11/20/2021	13:48:56	D	4.70
134	LUDHIANA	JAGRAON	AQUA	30.72000	75.46400	11/20/2021	13:20:10	D	22.80
135	LUDHIANA	JAGRAON	AQUA	30.77400	75.45000	11/20/2021	13:20:10	D	15.30
136	LUDHIANA	MACHHIWARA	S-NPP	30.94150	76.21140	11/20/2021	13:48:56	D	1.60
137	LUDHIANA	PAKHOWAL	S-NPP	30.71440	75.79730	11/20/2021	13:48:56	D	3.70
138	LUDHIANA	PAKHOWAL	S-NPP	30.71840	75.79680	11/20/2021	13:48:56	D	3.70
139	LUDHIANA	SIDHWAN BET	S-NPP	30.87150	75.50760	11/20/2021	13:48:56	D	12.50
140	LUDHIANA	SIDHWAN BET	S-NPP	30.87540	75.50700	11/20/2021	13:48:56	D	12.50
141	MANSA	BHIKHI	S-NPP	30.14600	75.39920	11/20/2021	13:48:56	D	3.50
142	MANSA	BHIKHI	S-NPP	30.18820	75.35970	11/20/2021	13:48:56	D	2.60
143	MANSA	BHIKHI	AQUA	30.05800	75.47100	11/20/2021	13:20:10	D	11.30
144	MANSA	BUDHLADA	S-NPP	29.80790	75.67660	11/20/2021	13:48:56	D	2.10
145	MANSA	BUDHLADA	S-NPP	29.84210	75.66590	11/20/2021	13:48:56	D	3.30
146	MANSA	BUDHLADA	S-NPP	29.84470	75.62060	11/20/2021	13:48:56	D	4.80
147	MANSA	BUDHLADA	S-NPP	29.89740	75.76320	11/20/2021	13:48:56	D	22.60
148	MANSA	BUDHLADA	S-NPP	29.90130	75.76260	11/20/2021	13:48:56	D	22.60
149	MANSA	BUDHLADA	S-NPP	29.92170	75.49530	11/20/2021	13:48:56	D	7.30

150	MANSA	BUDHLADA	AQUA	29.89900	75.67900	11/20/2021	13:20:10	D	16.10
151	MANSA	BUDHLADA	AQUA	29.99700	75.65000	11/20/2021	13:20:10	D	9.80
152	MANSA	JHUNIR	S-NPP	29.88860	75.37920	11/20/2021	13:48:56	D	8.00
153	MANSA	MANSA	S-NPP	30.00360	75.31530	11/20/2021	13:48:56	D	6.70
154	MANSA	MANSA	S-NPP	30.01120	75.31420	11/20/2021	13:48:56	D	5.10
155	MANSA	MANSA	S-NPP	30.03350	75.28210	11/20/2021	13:48:56	D	3.10
156	MANSA	MANSA	S-NPP	30.04530	75.35120	11/20/2021	13:48:56	D	2.10
157	MANSA	MANSA	S-NPP	30.04610	75.34710	11/20/2021	13:48:56	D	3.20
158	MANSA	MANSA	S-NPP	30.09300	75.36050	11/20/2021	13:48:56	D	3.70
159	MANSA	SARDULGARH	S-NPP	29.56380	75.28960	11/20/2021	13:48:56	D	17.80
160	MANSA	SARDULGARH	S-NPP	29.56510	75.30010	11/20/2021	13:48:56	D	5.60
161	MANSA	SARDULGARH	S-NPP	29.56950	75.27270	11/20/2021	13:48:56	D	2.30
162	MANSA	SARDULGARH	S-NPP	29.57080	75.25110	11/20/2021	13:48:56	D	11.50
163	MANSA	SARDULGARH	S-NPP	29.58840	75.30190	11/20/2021	13:48:56	D	6.60
164	MANSA	SARDULGARH	S-NPP	29.73860	75.27980	11/20/2021	13:48:56	D	35.00
165	MANSA	SARDULGARH	S-NPP	29.80680	75.24010	11/20/2021	13:48:56	D	7.40
166	MANSA	SARDULGARH	S-NPP	29.82250	75.24300	11/20/2021	13:48:56	D	10.30
167	MANSA	SARDULGARH	AQUA	29.55600	75.26800	11/20/2021	13:20:10	D	27.50
168	MANSA	SARDULGARH	AQUA	29.55700	75.27900	11/20/2021	13:20:10	D	37.10
169	MANSA	SARDULGARH	AQUA	29.56000	75.29600	11/20/2021	13:20:10	D	36.00
170	MANSA	SARDULGARH	AQUA	29.56200	75.30200	11/20/2021	13:20:10	D	17.40
171	MOGA	BAGHA PURANA	S-NPP	30.68960	74.99320	11/20/2021	13:48:56	D	9.30
172	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.28630	74.73420	11/20/2021	13:48:56	D	3.00
173	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.31760	74.73140	11/20/2021	13:48:56	D	4.80
174	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.33570	74.63070	11/20/2021	13:48:56	D	2.30
175	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.34920	74.61830	11/20/2021	13:48:56	D	4.90
176	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.35290	74.61780	11/20/2021	13:48:56	D	4.50
177	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.35840	74.60150	11/20/2021	13:48:56	D	5.90
178	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.42790	74.72170	11/20/2021	13:48:56	D	12.70

179	MUKTSAR	KOT BHAI AT GIDDERBAHA	AQUA	30.32700	74.68000	11/20/2021	13:20:10	D	16.70
180	MUKTSAR	LAMBI	S-NPP	29.96330	74.58730	11/20/2021	13:48:56	D	2.70
181	MUKTSAR	LAMBI	S-NPP	29.97680	74.57510	11/20/2021	13:48:56	D	20.30
182	MUKTSAR	LAMBI	S-NPP	29.99140	74.60300	11/20/2021	13:48:56	D	4.70
183	MUKTSAR	LAMBI	S-NPP	30.00240	74.60120	11/20/2021	13:48:56	D	13.00
184	MUKTSAR	LAMBI	S-NPP	30.07830	74.62140	11/20/2021	13:48:56	D	6.90
185	MUKTSAR	LAMBI	S-NPP	30.09800	74.59800	11/20/2021	13:48:56	D	3.30
186	MUKTSAR	LAMBI	S-NPP	30.10040	74.58750	11/20/2021	13:48:56	D	3.30
187	MUKTSAR	LAMBI	S-NPP	30.11940	74.55920	11/20/2021	13:48:56	D	2.30
188	MUKTSAR	LAMBI	AQUA	30.00300	74.51100	11/20/2021	13:20:10	D	14.50
189	MUKTSAR	LAMBI	AQUA	30.04200	74.52100	11/20/2021	13:20:10	D	13.60
190	MUKTSAR	MALOUT	S-NPP	30.10240	74.42150	11/20/2021	13:48:56	D	2.60
191	MUKTSAR	MALOUT	S-NPP	30.14990	74.47380	11/20/2021	13:48:56	D	4.20
192	MUKTSAR	MALOUT	S-NPP	30.15250	74.37580	11/20/2021	13:48:56	D	3.20
193	MUKTSAR	MALOUT	S-NPP	30.15790	74.41970	11/20/2021	13:48:56	D	2.20
194	MUKTSAR	MALOUT	S-NPP	30.17180	74.44240	11/20/2021	13:48:56	D	1.70
195	MUKTSAR	MALOUT	S-NPP	30.20100	74.43770	11/20/2021	13:48:56	D	6.30
196	MUKTSAR	MALOUT	S-NPP	30.33320	74.33840	11/20/2021	13:48:56	D	2.10
197	MUKTSAR	MALOUT	S-NPP	30.36270	74.33570	11/20/2021	13:48:56	D	4.70
198	MUKTSAR	MALOUT	AQUA	30.14300	74.46300	11/20/2021	13:20:10	D	17.20
199	MUKTSAR	MALOUT	AQUA	30.14900	74.46800	11/20/2021	13:20:10	D	11.60
200	MUKTSAR	MALOUT	AQUA	30.21500	74.36000	11/20/2021	13:20:10	D	11.70
201	MUKTSAR	MUKTSAR	S-NPP	30.37190	74.50500	11/20/2021	13:48:56	D	22.20
202	MUKTSAR	MUKTSAR	S-NPP	30.37300	74.50770	11/20/2021	13:48:56	D	10.40
203	MUKTSAR	MUKTSAR	S-NPP	30.42700	74.31530	11/20/2021	13:48:56	D	3.00
204	MUKTSAR	MUKTSAR	S-NPP	30.45340	74.35370	11/20/2021	13:48:56	D	1.30
205	MUKTSAR	MUKTSAR	S-NPP	30.46950	74.45670	11/20/2021	13:48:56	D	26.30
206	MUKTSAR	MUKTSAR	S-NPP	30.47030	74.45380	11/20/2021	13:48:56	D	16.50
207	MUKTSAR	MUKTSAR	S-NPP	30.47090	74.45880	11/20/2021	13:48:56	D	16.50
208	MUKTSAR	MUKTSAR	S-NPP	30.47380	74.46110	11/20/2021	13:48:56	D	14.40
209	MUKTSAR	MUKTSAR	S-NPP	30.49260	74.49360	11/20/2021	13:48:56	D	7.20
210	MUKTSAR	MUKTSAR	S-NPP	30.49400	74.44270	11/20/2021	13:48:56	D	3.00
211	MUKTSAR	MUKTSAR	S-NPP	30.50220	74.60450	11/20/2021	13:48:56	D	4.70

212	MUKTSAR	MUKTSAR	S-NPP	30.50460	74.69920	11/20/2021	13:48:56	D	2.10
213	MUKTSAR	MUKTSAR	S-NPP	30.50580	74.60390	11/20/2021	13:48:56	D	12.60
214	MUKTSAR	MUKTSAR	S-NPP	30.50620	74.70200	11/20/2021	13:48:56	D	6.90
215	MUKTSAR	MUKTSAR	S-NPP	30.53600	74.57340	11/20/2021	13:48:56	D	2.80
216	MUKTSAR	MUKTSAR	S-NPP	30.54530	74.40420	11/20/2021	13:48:56	D	1.80
217	MUKTSAR	MUKTSAR	S-NPP	30.55320	74.56040	11/20/2021	13:48:56	D	11.90
218	MUKTSAR	MUKTSAR	S-NPP	30.55690	74.55990	11/20/2021	13:48:56	D	11.90
219	MUKTSAR	MUKTSAR	S-NPP	30.56660	74.42600	11/20/2021	13:48:56	D	5.00
220	MUKTSAR	MUKTSAR	S-NPP	30.56970	74.42770	11/20/2021	13:48:56	D	5.00
221	MUKTSAR	MUKTSAR	S-NPP	30.57830	74.45950	11/20/2021	13:48:56	D	1.80
222	MUKTSAR	MUKTSAR	S-NPP	30.58060	74.45640	11/20/2021	13:48:56	D	2.10
223	MUKTSAR	MUKTSAR	S-NPP	30.62100	74.44990	11/20/2021	13:48:56	D	2.20
224	MUKTSAR	MUKTSAR	AQUA	30.47000	74.45800	11/20/2021	13:20:10	D	25.90
225	PATHANKOT	NAROT JAIMAL SINGH	S-NPP	32.21740	75.35530	11/20/2021	13:48:56	D	5.10
226	PATIALA	BHUNARHERI	AQUA	30.21800	76.60800	11/20/2021	13:20:10	D	7.90
227	PATIALA	NABHA	S-NPP	30.31880	76.08880	11/20/2021	13:48:56	D	2.00
228	PATIALA	NABHA	S-NPP	30.32690	76.16030	11/20/2021	13:48:56	D	3.60
229	PATIALA	NABHA	S-NPP	30.33150	76.16580	11/20/2021	13:48:56	D	3.10
230	PATIALA	NABHA	S-NPP	30.36730	75.99600	11/20/2021	13:48:56	D	4.40
231	PATIALA	NABHA	S-NPP	30.38310	76.21470	11/20/2021	13:48:56	D	7.40
232	PATIALA	NABHA	S-NPP	30.39480	76.17220	11/20/2021	13:48:56	D	2.40
233	PATIALA	NABHA	S-NPP	30.39880	76.17170	11/20/2021	13:48:56	D	2.40
234	PATIALA	NABHA	S-NPP	30.41260	76.18600	11/20/2021	13:48:56	D	4.60
235	PATIALA	NABHA	S-NPP	30.46290	76.19090	11/20/2021	13:48:56	D	2.90
236	PATIALA	NABHA	S-NPP	30.48070	76.09170	11/20/2021	13:48:56	D	9.90
237	PATIALA	NABHA	S-NPP	30.48130	76.09770	11/20/2021	13:48:56	D	9.90
238	PATIALA	NABHA	S-NPP	30.49380	76.32690	11/20/2021	13:48:56	D	6.20
239	PATIALA	NABHA	S-NPP	30.50550	76.32110	11/20/2021	13:48:56	D	23.30
240	PATIALA	PATIALA	S-NPP	30.47480	76.34210	11/20/2021	13:48:56	D	16.30
241	PATIALA	PATIALA	S-NPP	30.47490	76.34210	11/20/2021	13:48:56	D	18.30
242	PATIALA	PATIALA	S-NPP	30.47840	76.33740	11/20/2021	13:48:56	D	2.30
243	PATIALA	PATIALA	AQUA	30.25000	76.21000	11/20/2021	13:20:10	D	16.00
244	PATIALA	PATIALA	AQUA	30.48900	76.34400	11/20/2021	13:20:10	D	45.30

245	PATIALA	PATIALA	AQUA	30.49100	76.33500	11/20/2021	13:20:10	D	48.60
246	PATIALA	PATRAN	S-NPP	30.04370	76.08370	11/20/2021	13:48:56	D	15.30
247	PATIALA	PATRAN	AQUA	29.89300	75.95700	11/20/2021	13:20:10	D	18.10
248	PATIALA	SAMANA	S-NPP	30.01910	76.16750	11/20/2021	13:48:56	D	4.10
249	PATIALA	SAMANA	S-NPP	30.14220	76.23950	11/20/2021	13:48:56	D	2.00
250	PATIALA	SAMANA	S-NPP	30.14340	76.24060	11/20/2021	13:48:56	D	2.10
251	PATIALA	SAMANA	S-NPP	30.18540	76.10430	11/20/2021	13:48:56	D	9.80
252	PATIALA	SAMANA	S-NPP	30.19280	76.09730	11/20/2021	13:48:56	D	7.60
253	PATIALA	SAMANA	S-NPP	30.19870	76.15060	11/20/2021	13:48:56	D	36.40
254	PATIALA	SAMANA	S-NPP	30.20360	76.23200	11/20/2021	13:48:56	D	8.80
255	PATIALA	SAMANA	S-NPP	30.21530	76.19070	11/20/2021	13:48:56	D	4.90
256	PATIALA	SAMANA	S-NPP	30.24830	76.26650	11/20/2021	13:48:56	D	0.80
257	PATIALA	SAMANA	S-NPP	30.24870	76.26630	11/20/2021	13:48:56	D	1.00
258	PATIALA	SAMANA	AQUA	30.17300	76.23400	11/20/2021	13:20:10	D	16.90
259	SANGRUR	ANDANA	S-NPP	29.84260	75.98140	11/20/2021	13:48:56	D	5.40
260	SANGRUR	ANDANA	S-NPP	29.84650	75.98090	11/20/2021	13:48:56	D	18.50
261	SANGRUR	BHAWANIGARH	AQUA	30.28100	76.10400	11/20/2021	13:20:10	D	18.70
262	SANGRUR	BHAWANIGARH	AQUA	30.28400	76.11900	11/20/2021	13:20:10	D	9.70
263	SANGRUR	DHURI	S-NPP	30.37130	75.99550	11/20/2021	13:48:56	D	4.40
264	SANGRUR	DIRBA	AQUA	29.97600	75.96300	11/20/2021	13:20:10	D	18.90
265	SANGRUR	DIRBA	AQUA	30.12800	76.04500	11/20/2021	13:20:10	D	17.80
266	SANGRUR	LEHRA GAGA	S-NPP	29.87180	75.81860	11/20/2021	13:48:56	D	5.90
267	SANGRUR	LEHRA GAGA	S-NPP	29.87200	75.82070	11/20/2021	13:48:56	D	5.10
268	SANGRUR	LEHRA GAGA	S-NPP	29.89350	75.76380	11/20/2021	13:48:56	D	6.70
269	SANGRUR	LEHRA GAGA	S-NPP	29.94930	75.66460	11/20/2021	13:48:56	D	2.80
270	SANGRUR	LEHRA GAGA	S-NPP	29.97470	75.84960	11/20/2021	13:48:56	D	4.80
271	SANGRUR	LEHRA GAGA	AQUA	29.93800	75.89800	11/20/2021	13:20:10	D	14.00
272	SANGRUR	LEHRA GAGA	AQUA	29.94100	75.91300	11/20/2021	13:20:10	D	22.40
273	SANGRUR	LEHRA GAGA	AQUA	29.94300	75.90800	11/20/2021	13:20:10	D	32.70
274	SANGRUR	MALERKOTLA-1	S-NPP	30.47810	76.06790	11/20/2021	13:48:56	D	4.70
275	SANGRUR	MALERKOTLA-1	S-NPP	30.49270	76.05370	11/20/2021	13:48:56	D	10.00
276	SANGRUR	MALERKOTLA-1	S-NPP	30.49670	76.05310	11/20/2021	13:48:56	D	15.90
277	SANGRUR	MALERKOTLA-2	S-NPP	30.66170	75.86430	11/20/2021	13:48:56	D	4.80

278	SANGRUR	SANGRUR	S-NPP	30.19210	75.56540	11/20/2021	13:48:56	D	3.50
279	SANGRUR	SANGRUR	S-NPP	30.27530	75.77610	11/20/2021	13:48:56	D	4.40
280	SANGRUR	SHER PUR	AQUA	30.41700	75.71100	11/20/2021	13:20:10	D	16.60
281	TARN TARAN	CHOHLA SAHIB	S-NPP	31.29060	74.96660	11/20/2021	13:48:56	D	32.20
282	TARN TARAN	GANDIWIND TATLA	S-NPP	31.45480	74.66820	11/20/2021	13:48:56	D	3.00
283	TARN TARAN	KHADUR SAHIB	S-NPP	31.39590	75.17300	11/20/2021	13:48:56	D	2.70

### Details of residue burning events in Haryana on 20-Nov-2021

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m <sup>2</sup> )
1	BHIWANI	BHIWANI	S-NPP	28.98900	76.22010	11/20/2021	13:48:56	D	7.60
2	FATEHABAD	BHUNA	S-NPP	29.52130	75.73690	11/20/2021	13:48:56	D	3.60
3	FATEHABAD	BHUNA	S-NPP	29.55170	75.82840	11/20/2021	13:48:56	D	18.30
4	FATEHABAD	BHUNA	AQUA	29.50600	75.75000	11/20/2021	13:20:10	D	10.70
5	FATEHABAD	BHUNA	AQUA	29.54800	75.79000	11/20/2021	13:20:10	D	9.40
6	FATEHABAD	BHUNA	AQUA	29.61000	75.68700	11/20/2021	13:20:10	D	10.20
7	FATEHABAD	FATEHABAD	S-NPP	29.52090	75.31750	11/20/2021	13:48:56	D	3.50
8	FATEHABAD	FATEHABAD	S-NPP	29.54450	75.48710	11/20/2021	13:48:56	D	3.10
9	FATEHABAD	FATEHABAD	S-NPP	29.61550	75.30690	11/20/2021	13:48:56	D	9.50
10	FATEHABAD	FATEHABAD	S-NPP	29.61610	75.31220	11/20/2021	13:48:56	D	9.50
11	FATEHABAD	FATEHABAD	S-NPP	29.61930	75.30630	11/20/2021	13:48:56	D	9.50
12	FATEHABAD	FATEHABAD	AQUA	29.58100	75.34400	11/20/2021	13:20:10	D	10.80
13	FATEHABAD	FATEHABAD	AQUA	29.60300	75.46000	11/20/2021	13:20:10	D	11.10
14	FATEHABAD	RATIA	S-NPP	29.63750	75.51690	11/20/2021	13:48:56	D	2.40
15	FATEHABAD	RATIA	S-NPP	29.69890	75.42410	11/20/2021	13:48:56	D	3.60
16	FATEHABAD	RATIA	S-NPP	29.71980	75.40460	11/20/2021	13:48:56	D	18.40
17	FATEHABAD	RATIA	S-NPP	29.74290	75.51900	11/20/2021	13:48:56	D	3.10
18	FATEHABAD	RATIA	S-NPP	29.74480	75.51590	11/20/2021	13:48:56	D	7.30
19	FATEHABAD	RATIA	S-NPP	29.74550	75.52140	11/20/2021	13:48:56	D	7.30
20	HISAR	HANSI-I	S-NPP	29.16050	76.01400	11/20/2021	13:48:56	D	2.00
21	HISAR	HANSI-I	S-NPP	29.27010	75.89730	11/20/2021	13:48:56	D	6.70
22	HISAR	HANSI-II	S-NPP	29.09350	76.23220	11/20/2021	13:48:56	D	4.00
23	HISAR	HANSI-II	S-NPP	29.11320	76.26470	11/20/2021	13:48:56	D	12.90
24	HISAR	HANSI-II	S-NPP	29.12140	76.12330	11/20/2021	13:48:56	D	3.80
25	HISAR	HANSI-II	S-NPP	29.18140	76.20650	11/20/2021	13:48:56	D	2.90
26	HISAR	HANSI-II	S-NPP	29.20910	76.20250	11/20/2021	13:48:56	D	3.30
27	HISAR	NARNAUND	S-NPP	29.15550	76.14160	11/20/2021	13:48:56	D	11.70
28	HISAR	NARNAUND	S-NPP	29.18120	76.19040	11/20/2021	13:48:56	D	4.00
29	HISAR	NARNAUND	S-NPP	29.19210	76.15810	11/20/2021	13:48:56	D	3.50
30	HISAR	NARNAUND	S-NPP	29.20010	76.12200	11/20/2021	13:48:56	D	9.50



31	HISAR	NARNAUND	S-NPP	29.30740	76.12200	11/20/2021	13:48:56	D	5.30
32	HISAR	UKLANA	S-NPP	29.51540	75.78840	11/20/2021	13:48:56	D	4.90
33	JIND	ALEWA	S-NPP	29.48080	76.42960	11/20/2021	13:48:56	D	1.90
34	JIND	JIND	S-NPP	29.27920	76.39460	11/20/2021	13:48:56	D	3.40
35	JIND	JIND	S-NPP	29.28710	76.26610	11/20/2021	13:48:56	D	3.20
36	JIND	JIND	S-NPP	29.30500	76.47870	11/20/2021	13:48:56	D	6.80
37	JIND	JIND	S-NPP	29.35880	76.40260	11/20/2021	13:48:56	D	2.40
38	JIND	JIND	S-NPP	29.37390	76.35530	11/20/2021	13:48:56	D	3.30
39	JIND	JIND	AQUA	29.28600	76.25700	11/20/2021	13:20:10	D	7.80
40	JIND	JIND	AQUA	29.39400	76.39400	11/20/2021	13:20:10	D	14.70
41	JIND	JULANA	S-NPP	29.12030	76.47560	11/20/2021	13:48:56	D	4.90
42	JIND	JULANA	S-NPP	29.12120	76.48360	11/20/2021	13:48:56	D	8.50
43	JIND	JULANA	S-NPP	29.18630	76.48250	11/20/2021	13:48:56	D	2.70
44	JIND	JULANA	S-NPP	29.23100	76.43660	11/20/2021	13:48:56	D	2.40
45	JIND	NARWANA	S-NPP	29.72130	75.99570	11/20/2021	13:48:56	D	6.60
46	JIND	NARWANA	S-NPP	29.72530	75.99510	11/20/2021	13:48:56	D	2.80
47	JIND	PILLUKHERA	S-NPP	29.22300	76.55130	11/20/2021	13:48:56	D	6.50
48	JIND	PILLUKHERA	S-NPP	29.27180	76.58540	11/20/2021	13:48:56	D	4.30
49	JIND	PILLUKHERA	S-NPP	29.27540	76.58080	11/20/2021	13:48:56	D	4.30
50	JIND	PILLUKHERA	S-NPP	29.27590	76.58490	11/20/2021	13:48:56	D	4.30
51	JIND	PILLUKHERA	S-NPP	29.36260	76.54850	11/20/2021	13:48:56	D	1.30
52	JIND	PILLUKHERA	S-NPP	29.40130	76.56370	11/20/2021	13:48:56	D	4.50
53	JIND	PILLUKHERA	AQUA	29.25700	76.60400	11/20/2021	13:20:10	D	10.70
54	JIND	SAFIDON	S-NPP	29.28670	76.64530	11/20/2021	13:48:56	D	3.60
55	JIND	SAFIDON	S-NPP	29.39220	76.70620	11/20/2021	13:48:56	D	3.00
56	JIND	SAFIDON	S-NPP	29.41750	76.56140	11/20/2021	13:48:56	D	1.50
57	JIND	SAFIDON	S-NPP	29.44560	76.55730	11/20/2021	13:48:56	D	3.10
58	JIND	UCHANA	S-NPP	29.48310	76.13900	11/20/2021	13:48:56	D	7.30
59	JIND	UCHANA	S-NPP	29.48460	76.14080	11/20/2021	13:48:56	D	8.80
60	JIND	UCHANA	S-NPP	29.57080	76.31100	11/20/2021	13:48:56	D	11.70
61	JIND	UCHANA	AQUA	29.53200	76.13200	11/20/2021	13:20:10	D	8.80
62	KAITHAL	KAITHAL	S-NPP	29.67400	76.42690	11/20/2021	13:48:56	D	8.40
63	KAITHAL	KALAYAT	S-NPP	29.58880	76.25440	11/20/2021	13:48:56	D	5.40

64	KAITHAL	KALAYAT	S-NPP	29.66840	76.33820	11/20/2021	13:48:56	D	1.80
65	KAITHAL	KALAYAT	S-NPP	29.71500	76.28220	11/20/2021	13:48:56	D	5.20
66	KAITHAL	KALAYAT	S-NPP	29.71640	76.28120	11/20/2021	13:48:56	D	5.10
67	KAITHAL	RAJOUND	S-NPP	29.67450	76.43090	11/20/2021	13:48:56	D	8.40
68	KAITHAL	RAJOUND	AQUA	29.64500	76.51700	11/20/2021	13:20:10	D	8.40
69	KARNAL	ASSANDH	S-NPP	29.44180	76.48400	11/20/2021	13:48:56	D	2.20
70	KARNAL	ASSANDH	S-NPP	29.46800	76.76740	11/20/2021	13:48:56	D	1.40
71	KARNAL	ASSANDH	S-NPP	29.61290	76.54250	11/20/2021	13:48:56	D	2.20
72	KARNAL	NILOKHERI	S-NPP	29.88450	76.84170	11/20/2021	13:48:56	D	8.50
73	KARNAL	NILOKHERI	S-NPP	29.88600	76.84170	11/20/2021	13:48:56	D	9.60
74	KURUKSHETRA	THANESAR	S-NPP	29.88840	76.82400	11/20/2021	13:48:56	D	2.50
75	PANIPAT	ISRANA	S-NPP	29.19710	76.87910	11/20/2021	13:48:56	D	3.00
76	PANIPAT	ISRANA	S-NPP	29.25770	76.83800	11/20/2021	13:48:56	D	4.50
77	PANIPAT	ISRANA	S-NPP	29.25810	76.84220	11/20/2021	13:48:56	D	4.70
78	PANIPAT	ISRANA	S-NPP	29.26450	76.82430	11/20/2021	13:48:56	D	4.00
79	PANIPAT	ISRANA	S-NPP	29.28670	76.91510	11/20/2021	13:48:56	D	3.30
80	PANIPAT	ISRANA	S-NPP	29.29480	76.68150	11/20/2021	13:48:56	D	2.70
81	PANIPAT	ISRANA	S-NPP	29.29750	76.70620	11/20/2021	13:48:56	D	1.90
82	PANIPAT	ISRANA	S-NPP	29.30510	76.81450	11/20/2021	13:48:56	D	2.10
83	PANIPAT	ISRANA	S-NPP	29.32840	76.91370	11/20/2021	13:48:56	D	2.20
84	PANIPAT	MADLAUDA	S-NPP	29.32020	76.83790	11/20/2021	13:48:56	D	3.10
85	PANIPAT	MADLAUDA	S-NPP	29.33730	76.69230	11/20/2021	13:48:56	D	2.70
86	PANIPAT	MADLAUDA	S-NPP	29.34210	76.80940	11/20/2021	13:48:56	D	2.30
87	PANIPAT	MADLAUDA	S-NPP	29.34500	76.80970	11/20/2021	13:48:56	D	3.30
88	PANIPAT	MADLAUDA	S-NPP	29.34960	76.81330	11/20/2021	13:48:56	D	3.10
89	PANIPAT	SAMALKHA	S-NPP	29.21260	76.94540	11/20/2021	13:48:56	D	3.40
90	ROHTAK	LAKHAN MAJRA	S-NPP	29.05560	76.41750	11/20/2021	13:48:56	D	4.50
91	ROHTAK	LAKHAN MAJRA	S-NPP	29.08350	76.52110	11/20/2021	13:48:56	D	3.20
92	ROHTAK	ROHTAK	S-NPP	28.94380	76.51690	11/20/2021	13:48:56	D	2.70
93	ROHTAK	ROHTAK	S-NPP	28.96830	76.70090	11/20/2021	13:48:56	D	2.20
94	ROHTAK	ROHTAK	S-NPP	29.02350	76.57010	11/20/2021	13:48:56	D	2.10
95	SIRSA	BARAGUNDA	S-NPP	29.62690	75.04580	11/20/2021	13:48:56	D	6.50
96	SIRSA	ELLENABAD	S-NPP	29.45900	74.82680	11/20/2021	13:48:56	D	3.60

97	SIRSA	ELLENABAD	S-NPP	29.49350	74.74050	11/20/2021	13:48:56	D	12.50
98	SIRSA	ELLENABAD	S-NPP	29.49720	74.73990	11/20/2021	13:48:56	D	12.50
99	SIRSA	ELLENABAD	AQUA	29.43700	74.89300	11/20/2021	13:20:10	D	14.70
100	SIRSA	NATHUSARI CHOPTA	S-NPP	29.54870	75.29190	11/20/2021	13:48:56	D	5.40
101	SIRSA	NATHUSARI CHOPTA	AQUA	29.55900	75.28500	11/20/2021	13:20:10	D	38.50
102	SIRSA	RANIA	S-NPP	29.48050	74.84880	11/20/2021	13:48:56	D	4.90
103	SIRSA	RANIA	S-NPP	29.49340	74.83150	11/20/2021	13:48:56	D	13.60
104	SIRSA	RANIA	S-NPP	29.50570	74.87030	11/20/2021	13:48:56	D	4.20
105	SIRSA	RANIA	S-NPP	29.51560	74.79760	11/20/2021	13:48:56	D	5.50
106	SIRSA	RANIA	S-NPP	29.53590	74.87070	11/20/2021	13:48:56	D	2.40
107	SIRSA	RANIA	AQUA	29.48400	74.83700	11/20/2021	13:20:10	D	17.90
108	SIRSA	SIRSA	S-NPP	29.44700	74.91530	11/20/2021	13:48:56	D	14.50
109	SIRSA	SIRSA	S-NPP	29.44900	74.91300	11/20/2021	13:48:56	D	21.70
110	SIRSA	SIRSA	S-NPP	29.45070	74.91470	11/20/2021	13:48:56	D	14.50
111	SIRSA	SIRSA	S-NPP	29.49110	75.03210	11/20/2021	13:48:56	D	3.00
112	SIRSA	SIRSA	S-NPP	29.52660	74.94910	11/20/2021	13:48:56	D	10.80
113	SIRSA	SIRSA	S-NPP	29.53100	74.95350	11/20/2021	13:48:56	D	10.80
114	SIRSA	SIRSA	S-NPP	29.54200	75.17080	11/20/2021	13:48:56	D	1.60
115	SIRSA	SIRSA	AQUA	29.53700	75.17600	11/20/2021	13:20:10	D	12.80
116	SONIPAT	GANAUR	S-NPP	29.17010	76.89980	11/20/2021	13:48:56	D	3.30
117	SONIPAT	GOHANA	S-NPP	28.98490	76.73990	11/20/2021	13:48:56	D	2.30
118	SONIPAT	GOHANA	S-NPP	28.98900	76.73940	11/20/2021	13:48:56	D	2.30
119	SONIPAT	GOHANA	S-NPP	29.12800	76.77000	11/20/2021	13:48:56	D	4.40
120	SONIPAT	GOHANA	S-NPP	29.14610	76.83100	11/20/2021	13:48:56	D	2.60
121	SONIPAT	GOHANA	S-NPP	29.15930	76.83760	11/20/2021	13:48:56	D	2.50
122	SONIPAT	KATHURA	S-NPP	29.08710	76.55300	11/20/2021	13:48:56	D	1.90
123	SONIPAT	KATHURA	S-NPP	29.12910	76.51890	11/20/2021	13:48:56	D	3.40
124	SONIPAT	KATHURA	AQUA	29.22600	76.49200	11/20/2021	13:20:10	D	6.20
125	SONIPAT	MUNDLANA	S-NPP	29.18570	76.85090	11/20/2021	13:48:56	D	2.90
126	SONIPAT	SONIPAT	S-NPP	29.01680	76.87780	11/20/2021	13:48:56	D	3.90
127	YAMUNANAGAR	MUSTAFABAD	S-NPP	30.15240	77.15470	11/20/2021	13:48:56	D	5.10

### Details of residue burning events in Uttar Pradesh on 20-Nov-2021

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	ALIGARH	GABHANA	S-NPP	28.15160	77.75530	11/20/2021	13:48:56	D	4.40
2	AMROHA	AMROHA	S-NPP	28.92960	78.65560	11/20/2021	13:48:56	D	2.20
3	BAGHPAT	BAGHPAT	S-NPP	29.01900	77.27010	11/20/2021	02:38:57	N	1.00
4	BALLIA	RASRA	AQUA	25.91900	83.90400	11/20/2021	13:20:10	D	7.40
5	BAREILLY	MIRGANJ	S-NPP	28.52660	79.21110	11/20/2021	13:48:56	D	3.00
6	BAREILLY	MIRGANJ	S-NPP	28.52800	79.21010	11/20/2021	13:48:56	D	4.10
7	BIJNOR	BIJNOR	S-NPP	29.28460	78.16440	11/20/2021	13:48:56	D	2.60
8	BIJNOR	CHANDPUR	S-NPP	29.08740	78.42080	11/20/2021	13:48:56	D	3.30
9	BULANSAHAR	BULANSHAHAR	S-NPP	28.52630	77.89010	11/20/2021	13:48:56	D	8.90
10	GHAZIABAD	GHAZIABAD	S-NPP	28.72970	77.54040	11/20/2021	13:48:56	D	1.70
11	GONDA	COLONELGANJ	S-NPP	27.04890	81.76860	11/20/2021	13:48:56	D	2.10
12	MEERUT	MAWANA	S-NPP	29.12580	77.85510	11/20/2021	13:48:56	D	2.90
13	MEERUT	MEERUT	S-NPP	29.00880	77.60970	11/20/2021	13:48:56	D	4.40
14	MEERUT	SARDHANA	S-NPP	29.13810	77.53790	11/20/2021	13:48:56	D	1.80
15	SHAMLI	KAIRANA	S-NPP	29.50640	77.13560	11/20/2021	13:48:56	D	13.00
16	SHAMLI	SHAMLI	S-NPP	29.50770	77.38800	11/20/2021	13:48:56	D	4.20
17	SHAMLI	SHAMLI	S-NPP	29.51010	77.38390	11/20/2021	13:48:56	D	4.40
18	SHAMLI	SHAMLI	S-NPP	29.51190	77.40200	11/20/2021	13:48:56	D	3.80
19	SHAMLI	SHAMLI	S-NPP	29.60150	77.43190	11/20/2021	13:48:56	D	2.60
20	SHARANPUR	NAKUR	AQUA	29.69000	77.24900	11/20/2021	13:20:10	D	6.40

### Details of residue burning events in Rajasthan on 20-Nov-2021

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	GANGANAGAR	SURATGARH	S-NPP	29.33210	73.83410	11/20/2021	13:48:56	D	6.00
2	GANGANAGAR	SURATGARH	S-NPP	29.33380	73.87540	11/20/2021	13:48:56	D	3.30
3	GANGANAGAR	SURATGARH	S-NPP	29.33620	73.83800	11/20/2021	13:48:56	D	6.90
4	GANGANAGAR	SURATGARH	S-NPP	29.33630	73.81040	11/20/2021	13:48:56	D	4.60
5	GANGANAGAR	SURATGARH	S-NPP	29.33740	73.81940	11/20/2021	13:48:56	D	3.70
6	GANGANAGAR	SURATGARH	S-NPP	29.35010	73.94690	11/20/2021	13:48:56	D	5.90
7	GANGANAGAR	SURATGARH	S-NPP	29.35010	73.97480	11/20/2021	13:48:56	D	11.50
8	GANGANAGAR	SURATGARH	S-NPP	29.35840	73.95480	11/20/2021	13:48:56	D	8.30
9	GANGANAGAR	SURATGARH	S-NPP	29.35890	73.95940	11/20/2021	13:48:56	D	5.80
10	GANGANAGAR	VIJAY NAGAR	S-NPP	29.24460	73.57470	11/20/2021	13:48:56	D	1.90
11	GANGANAGAR	VIJAY NAGAR	S-NPP	29.30850	73.65070	11/20/2021	13:48:56	D	4.50
12	HANUMANGARH	HANUMANGARH	S-NPP	29.51840	74.19510	11/20/2021	13:48:56	D	4.00
13	HANUMANGARH	HANUMANGARH	S-NPP	29.52800	74.21260	11/20/2021	13:48:56	D	14.70
14	HANUMANGARH	HANUMANGARH	S-NPP	29.56440	74.24030	11/20/2021	13:48:56	D	5.60
15	HANUMANGARH	HANUMANGARH	S-NPP	29.57590	74.38850	11/20/2021	13:48:56	D	27.60
16	HANUMANGARH	HANUMANGARH	S-NPP	29.58120	74.25680	11/20/2021	13:48:56	D	6.60
17	HANUMANGARH	HANUMANGARH	S-NPP	29.58130	74.37300	11/20/2021	13:48:56	D	5.00
18	HANUMANGARH	HANUMANGARH	S-NPP	29.58670	74.27040	11/20/2021	13:48:56	D	5.00
19	HANUMANGARH	HANUMANGARH	S-NPP	29.58680	74.38670	11/20/2021	13:48:56	D	4.70
20	HANUMANGARH	HANUMANGARH	S-NPP	29.58710	74.26690	11/20/2021	13:48:56	D	4.80
21	HANUMANGARH	HANUMANGARH	S-NPP	29.61610	74.38350	11/20/2021	13:48:56	D	3.30
22	HANUMANGARH	HANUMANGARH	S-NPP	29.61980	74.38290	11/20/2021	13:48:56	D	3.40
23	HANUMANGARH	HANUMANGARH	AQUA	29.58900	74.30100	11/20/2021	13:20:10	D	13.80
24	HANUMANGARH	PJLIBANGA	S-NPP	29.39140	73.93070	11/20/2021	13:48:56	D	5.90
25	HANUMANGARH	PJLIBANGA	S-NPP	29.40090	74.00380	11/20/2021	13:48:56	D	1.70
26	HANUMANGARH	PJLIBANGA	S-NPP	29.41500	73.97340	11/20/2021	13:48:56	D	1.70
27	HANUMANGARH	PJLIBANGA	S-NPP	29.45510	74.03950	11/20/2021	13:48:56	D	14.50
28	HANUMANGARH	PJLIBANGA	AQUA	29.42600	74.01200	11/20/2021	13:20:10	D	14.20
29	HANUMANGARH	PJLIBANGA	AQUA	29.46600	74.08800	11/20/2021	13:20:10	D	18.40

30	HANUMANGARH	SANGHRIYA	S-NPP	29.62570	74.43090	11/20/2021	13:48:56	D	3.00
31	HANUMANGARH	TIBI	S-NPP	29.53680	74.61150	11/20/2021	13:48:56	D	7.90
32	HANUMANGARH	TIBI	S-NPP	29.56490	74.53750	11/20/2021	13:48:56	D	21.00
33	HANUMANGARH	TIBI	S-NPP	29.57280	74.54120	11/20/2021	13:48:56	D	4.40
34	HANUMANGARH	TIBI	S-NPP	29.57650	74.42250	11/20/2021	13:48:56	D	23.10
35	HANUMANGARH	TIBI	S-NPP	29.57650	74.54060	11/20/2021	13:48:56	D	35.60
36	HANUMANGARH	TIBI	S-NPP	29.57710	74.51580	11/20/2021	13:48:56	D	4.40
37	HANUMANGARH	TIBI	S-NPP	29.58320	74.44600	11/20/2021	13:48:56	D	10.50
38	HANUMANGARH	TIBI	S-NPP	29.58380	74.42140	11/20/2021	13:48:56	D	8.70
39	HANUMANGARH	TIBI	S-NPP	29.58740	74.53890	11/20/2021	13:48:56	D	2.80
40	HANUMANGARH	TIBI	S-NPP	29.58800	74.54370	11/20/2021	13:48:56	D	2.80
41	HANUMANGARH	TIBI	S-NPP	29.59160	74.54320	11/20/2021	13:48:56	D	4.50
42	HANUMANGARH	TIBI	S-NPP	29.60250	74.48220	11/20/2021	13:48:56	D	10.10
43	HANUMANGARH	TIBI	S-NPP	29.60490	74.44250	11/20/2021	13:48:56	D	3.90
44	HANUMANGARH	TIBI	S-NPP	29.60510	74.44400	11/20/2021	13:48:56	D	4.60
45	HANUMANGARH	TIBI	S-NPP	29.62370	74.47540	11/20/2021	13:48:56	D	4.30
46	HANUMANGARH	TIBI	S-NPP	29.62490	74.48510	11/20/2021	13:48:56	D	3.50
47	HANUMANGARH	TIBI	S-NPP	29.63880	74.50760	11/20/2021	13:48:56	D	8.00
48	HANUMANGARH	TIBI	S-NPP	29.65220	74.46590	11/20/2021	13:48:56	D	13.90
49	HANUMANGARH	TIBI	AQUA	29.57900	74.53400	11/20/2021	13:20:10	D	65.00
50	HANUMANGARH	TIBI	AQUA	29.58200	74.55300	11/20/2021	13:20:10	D	13.90
51	HANUMANGARH	TIBI	AQUA	29.58400	74.52500	11/20/2021	13:20:10	D	38.60
52	HANUMANGARH	TIBI	AQUA	29.58800	74.54400	11/20/2021	13:20:10	D	45.30
53	HANUMANGARH	TIBI	AQUA	29.59600	74.46200	11/20/2021	13:20:10	D	24.90

**Details of residue burning events in Madhya Pradesh on 20-Nov-2021**

<b>S. No.</b>	<b>District</b>	<b>Tehsil / Block</b>	<b>Satellite</b>	<b>Latitude</b>	<b>Longitude</b>	<b>ACQ_DATE</b>	<b>ACQ_TIME</b>	<b>Day / Night</b>	<b>Fire Power (W/m2)</b>
1	REWA	GURH	S-NPP	24.48330	81.48390	11/20/2021	13:48:56	D	3.00
2	REWA	GURH	S-NPP	24.50550	81.48400	11/20/2021	13:48:56	D	2.00
3	REWA	HUZUR	S-NPP	24.43010	81.36100	11/20/2021	13:48:56	D	2.60
4	SATNA	RAMPURBAGHLEAN	S-NPP	24.55700	81.14490	11/20/2021	13:48:56	D	3.40
5	SATNA	RAMPURBAGHLEAN	S-NPP	24.67060	81.01450	11/20/2021	13:48:56	D	3.00
6	SATNA	UCHAHAR	AQUA	24.39000	80.83900	11/20/2021	13:20:10	D	8.40

## 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

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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)

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