



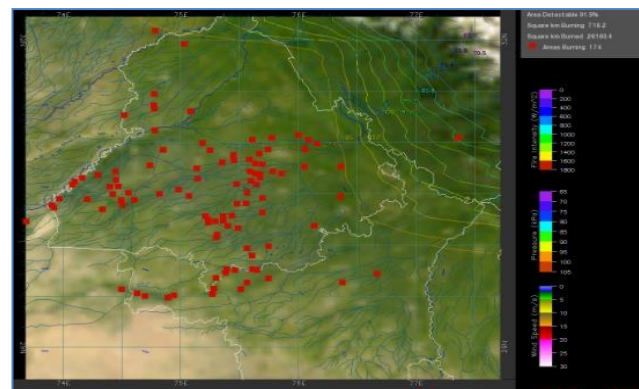
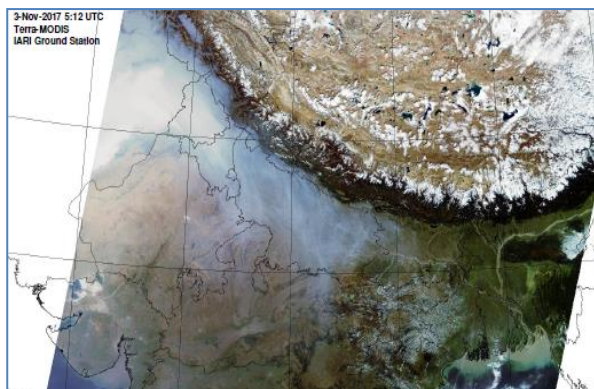
**Bulletin
No. 40**

**Events Date:
24-Oct-2021**

**Issued on:
25-Oct-2021**



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



Prepared by:

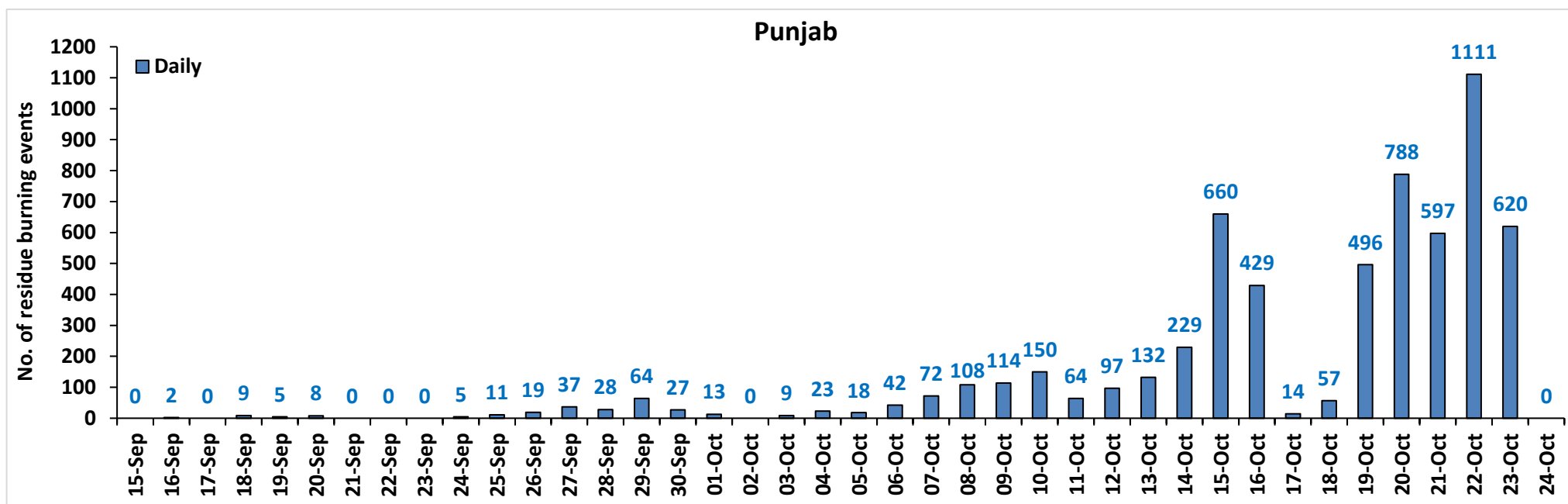
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

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

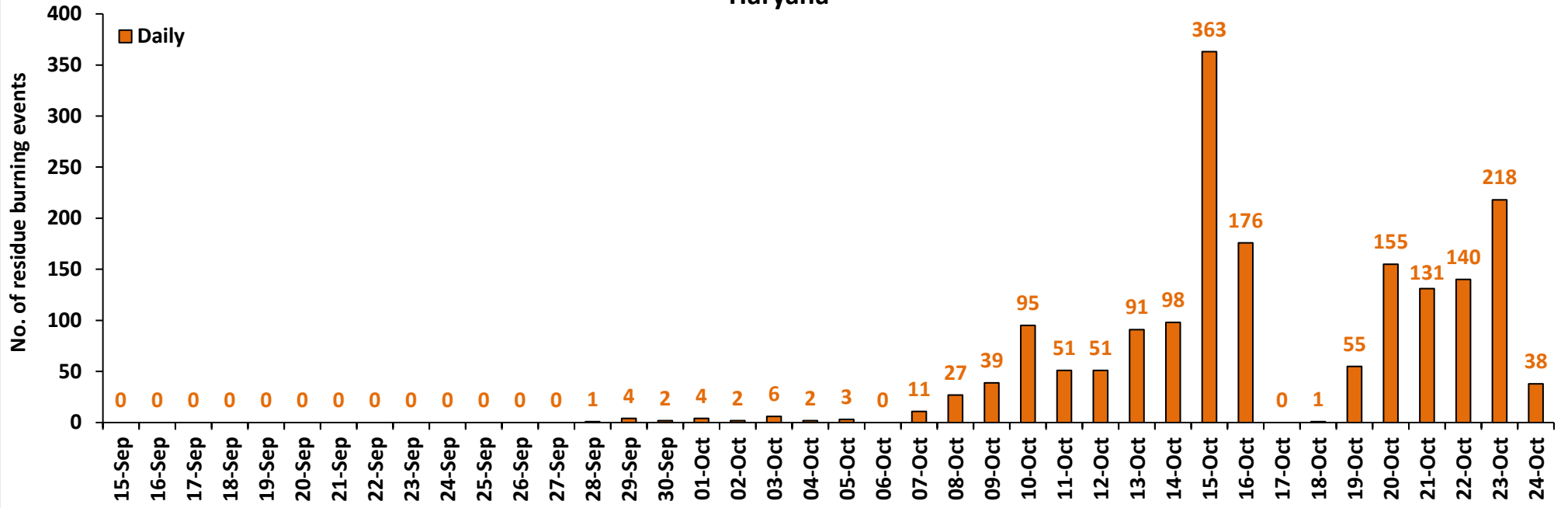
Highlights for 24-October-2021

- 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 **87** residue burning events in the six study States on 24-Oct-2021.
- The state wise events detected on 24-Oct-2021 were **0** in Punjab, **38** in Haryana, **11** in UP, **0** in Delhi, **4** in Rajasthan and **34** in MP.
- Detection of burning events by satellites was hampered due to clouds over Punjab, Haryana, Rajasthan and MP.
- The number of events has decreased from **885** on 23-Oct-2021 to **87** on 24-Oct-2021 in the six study states.
- Total **8762** burning events were detected in the six states between 15-Sept-2021 and 24-Oct-2021, which are distributed as **6058**, **1764**, **653**, **0**, **56** and **231** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.
- Overall, the total burning events recorded in the six states are **53.3%** less than in 2020 till date. Punjab recorded **59.1%** reduction, Haryana recorded **9.1%** increase, UP recorded **10.9%** reduction, Delhi recorded **100%** reduction, Rajasthan recorded **87.1%** reduction and MP recorded **80.4%** reduction, in the current season than in 2020.

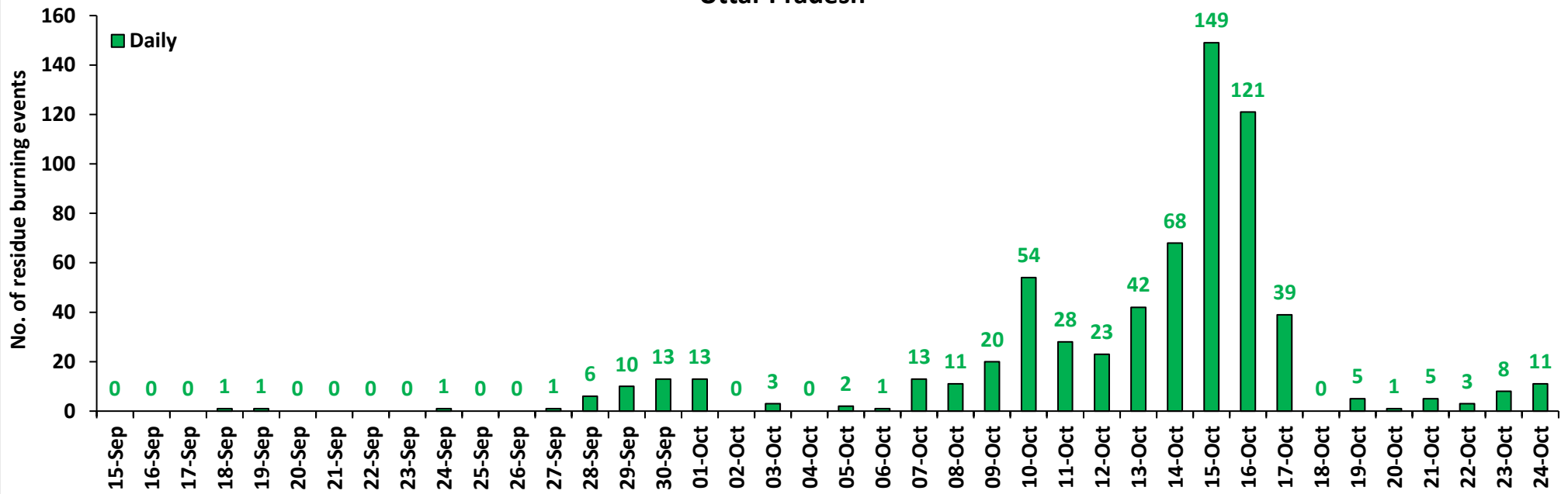
Temporal distribution of rice residue burning events for the study States in 2021



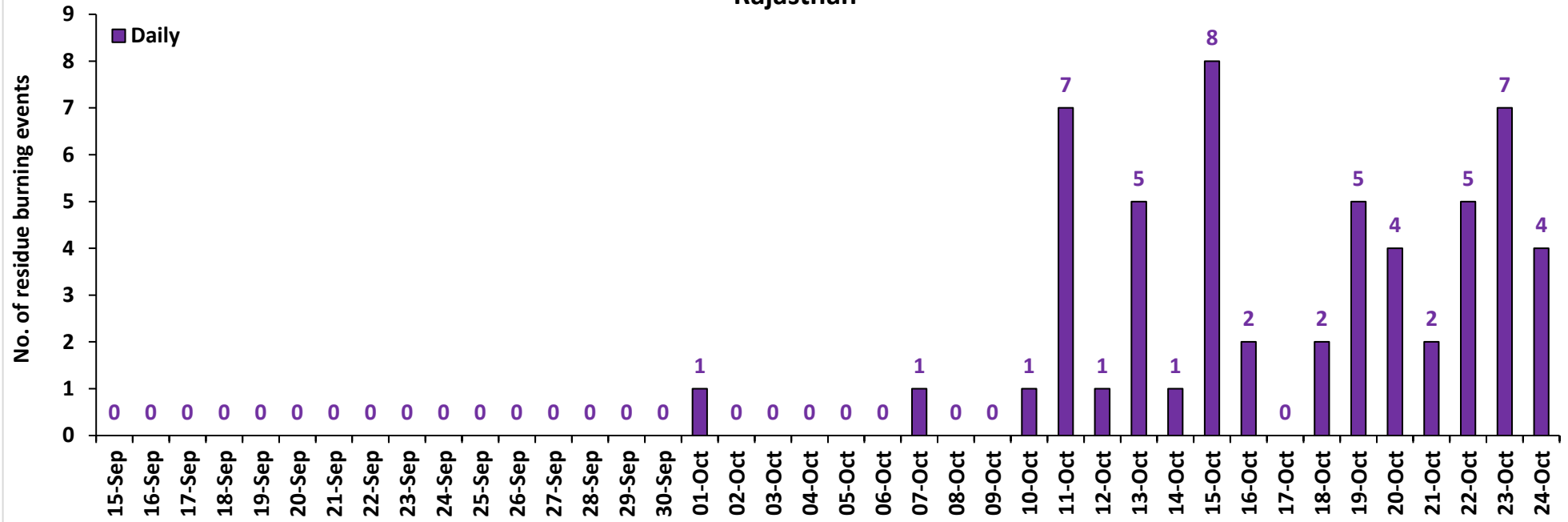
Haryana



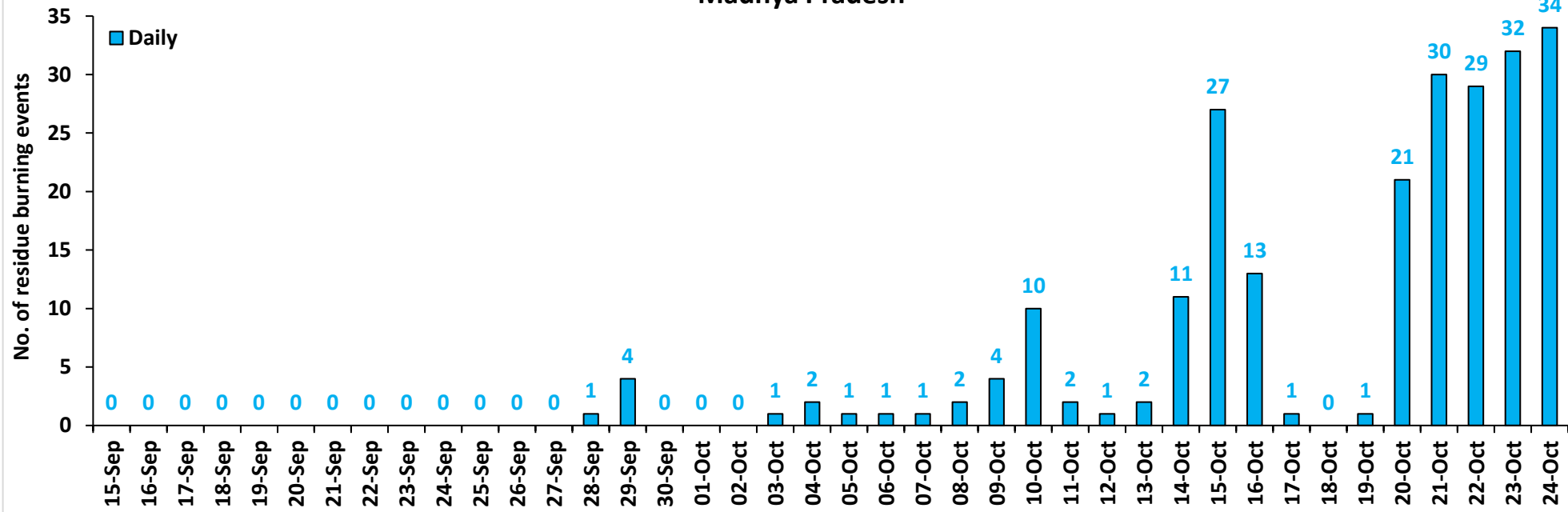
Uttar Pradesh



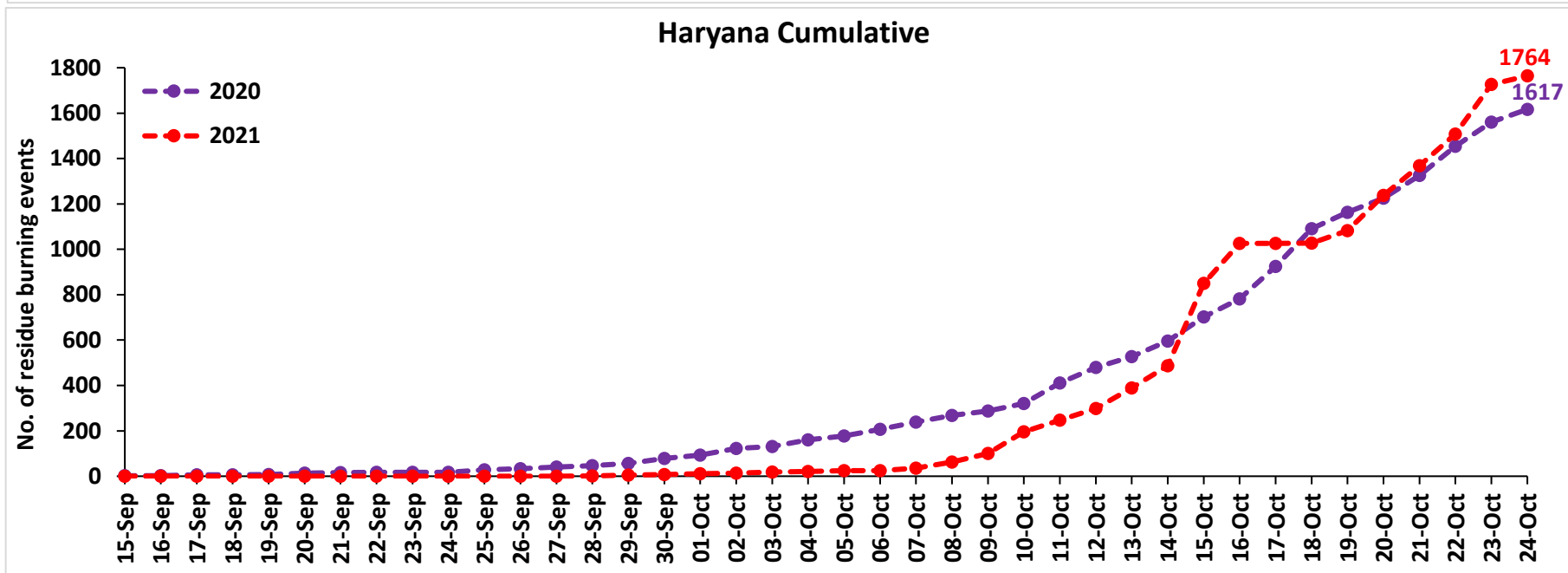
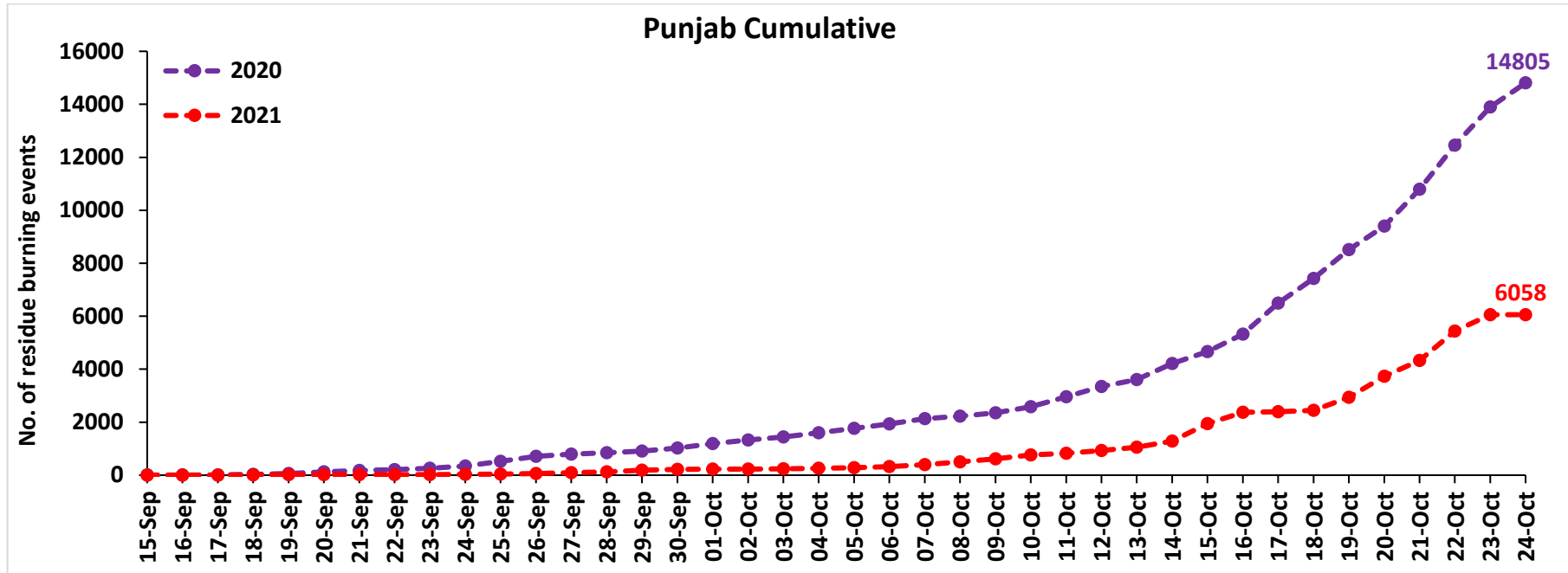
Rajasthan

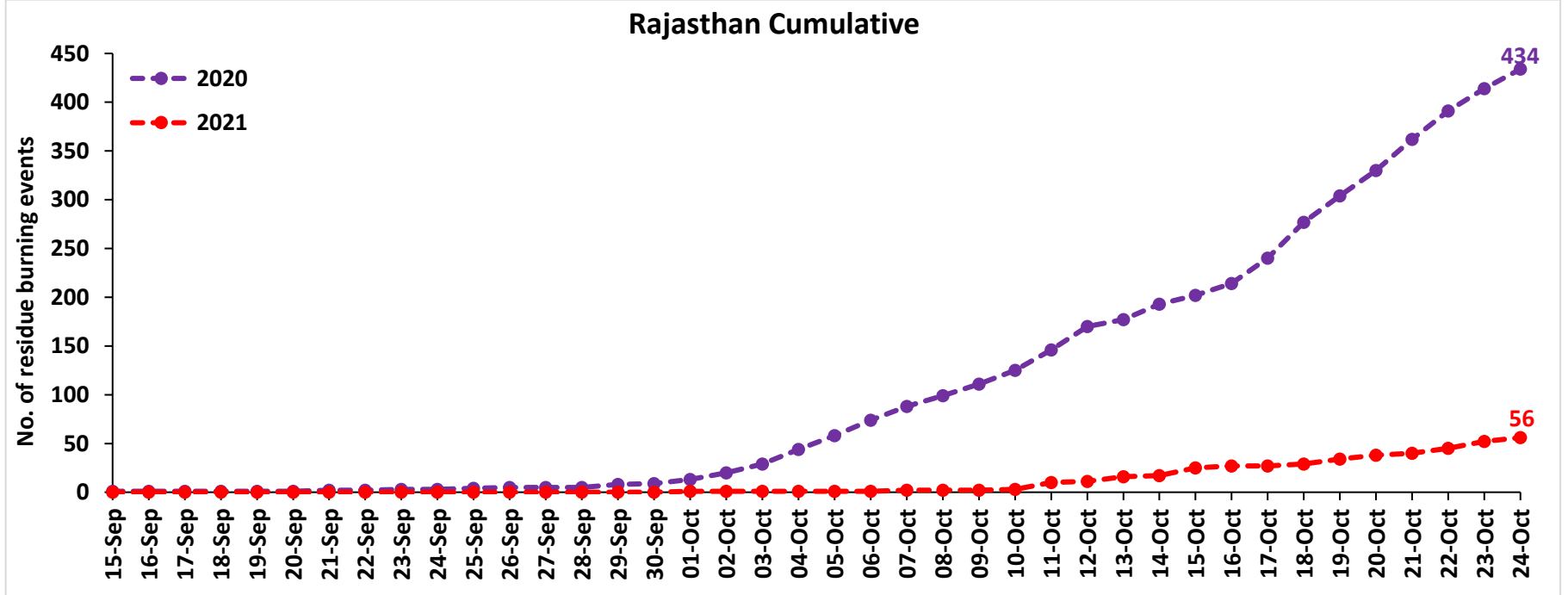
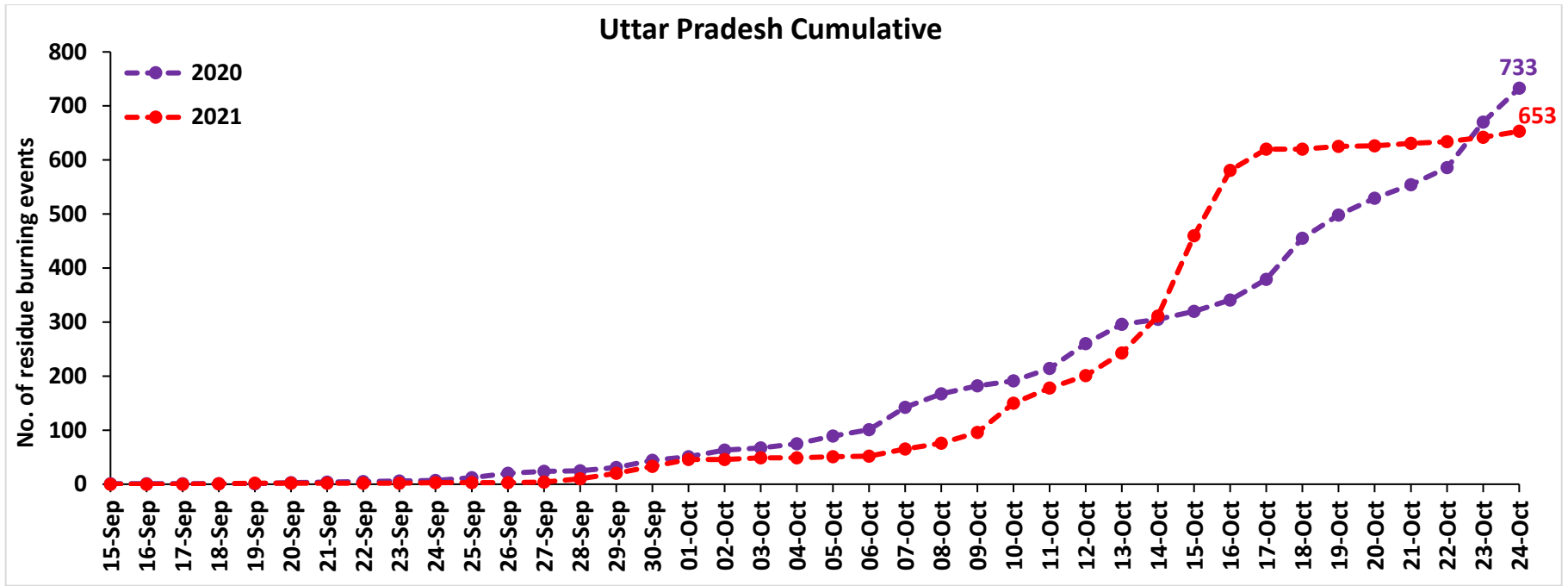


Madhya Pradesh

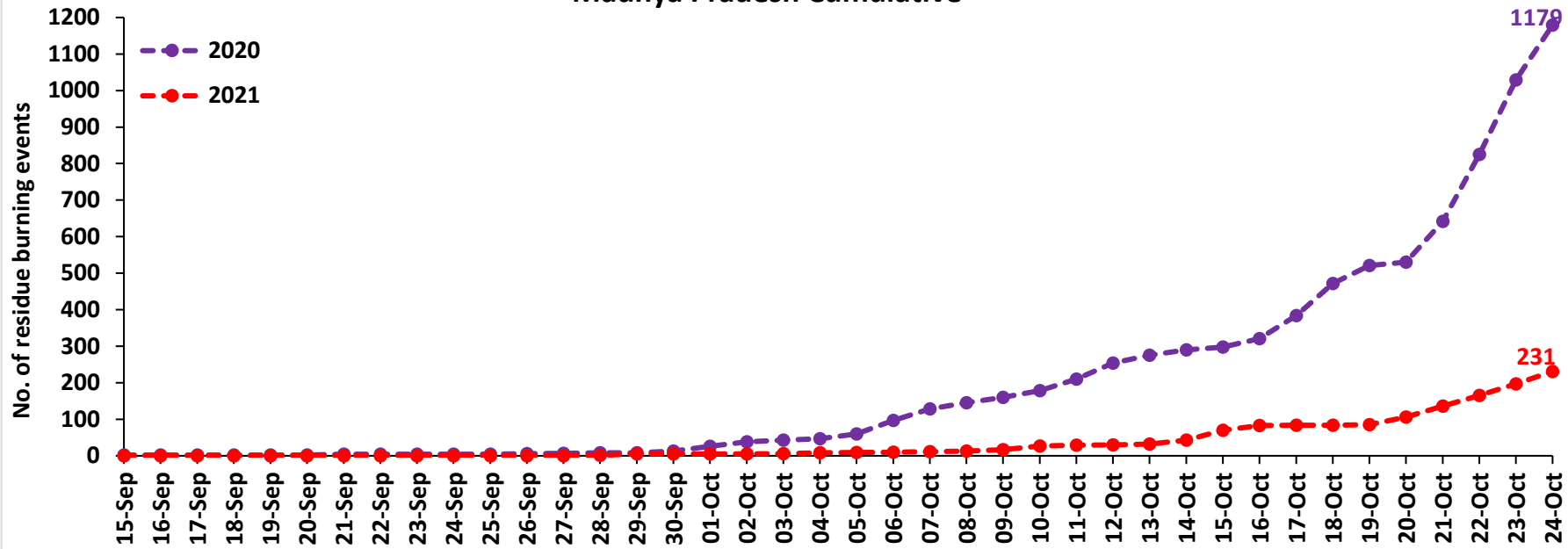


Comparison of residue burning events in current year (2021) with previous year (2020) for the study States

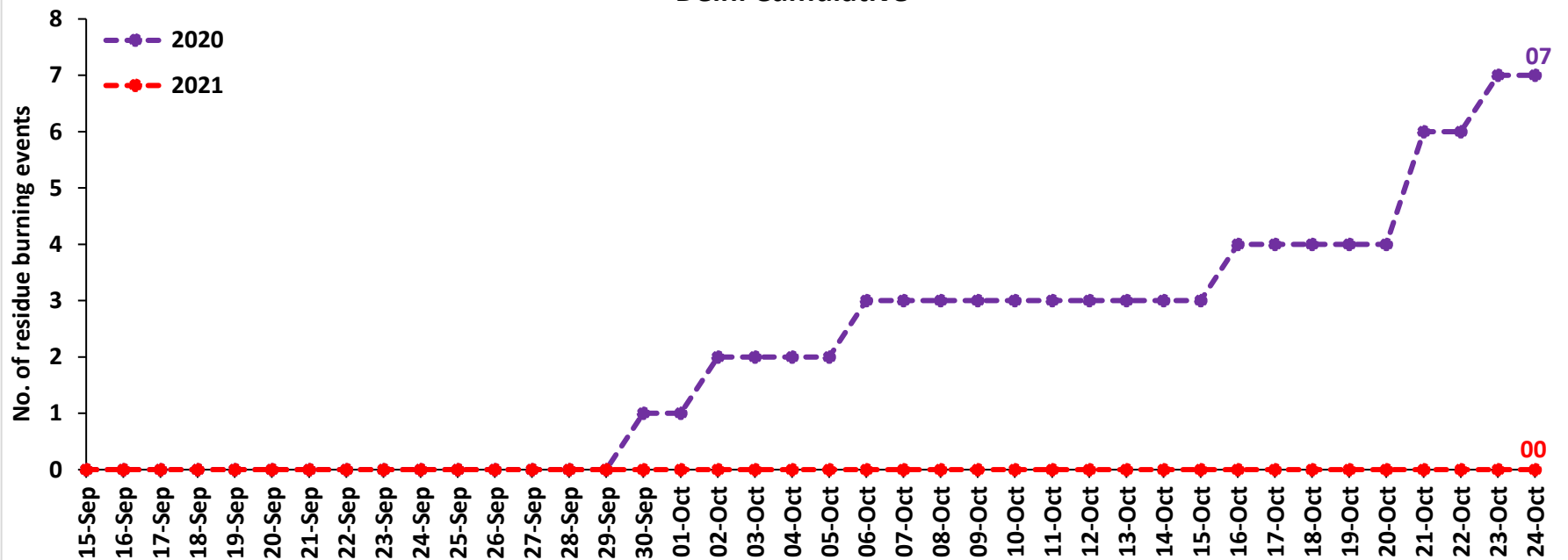




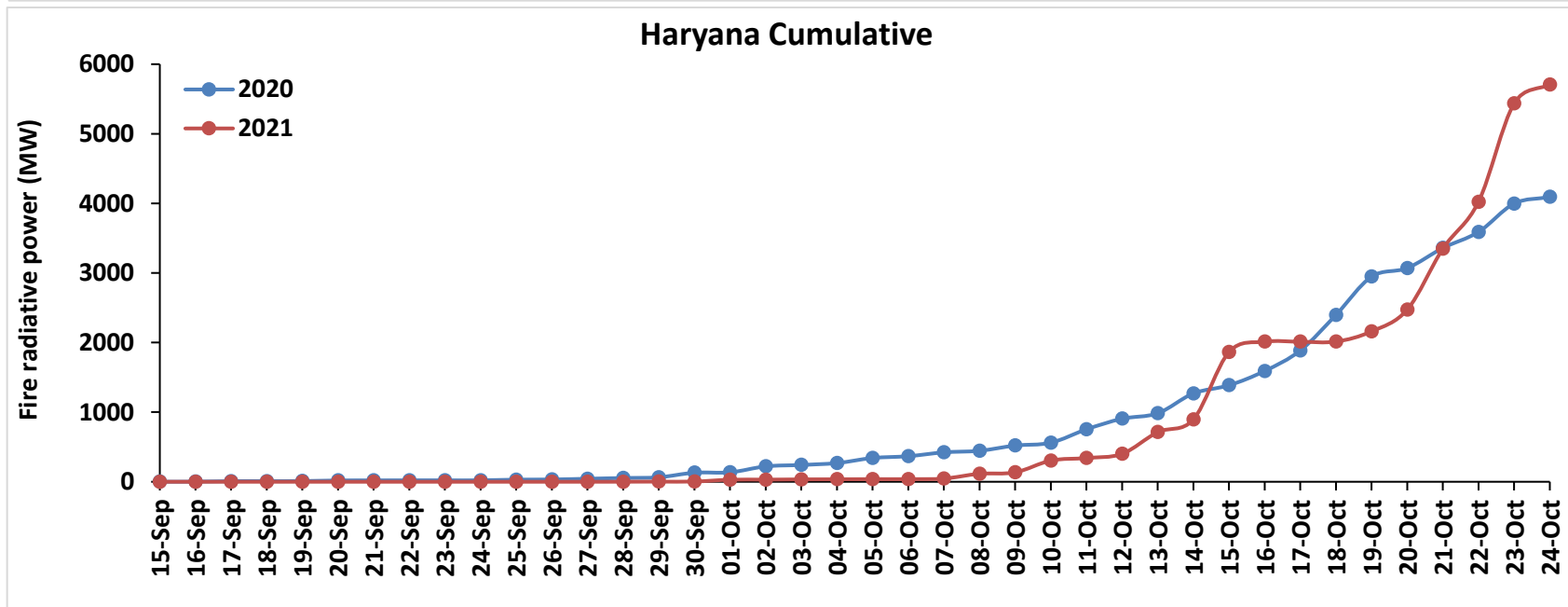
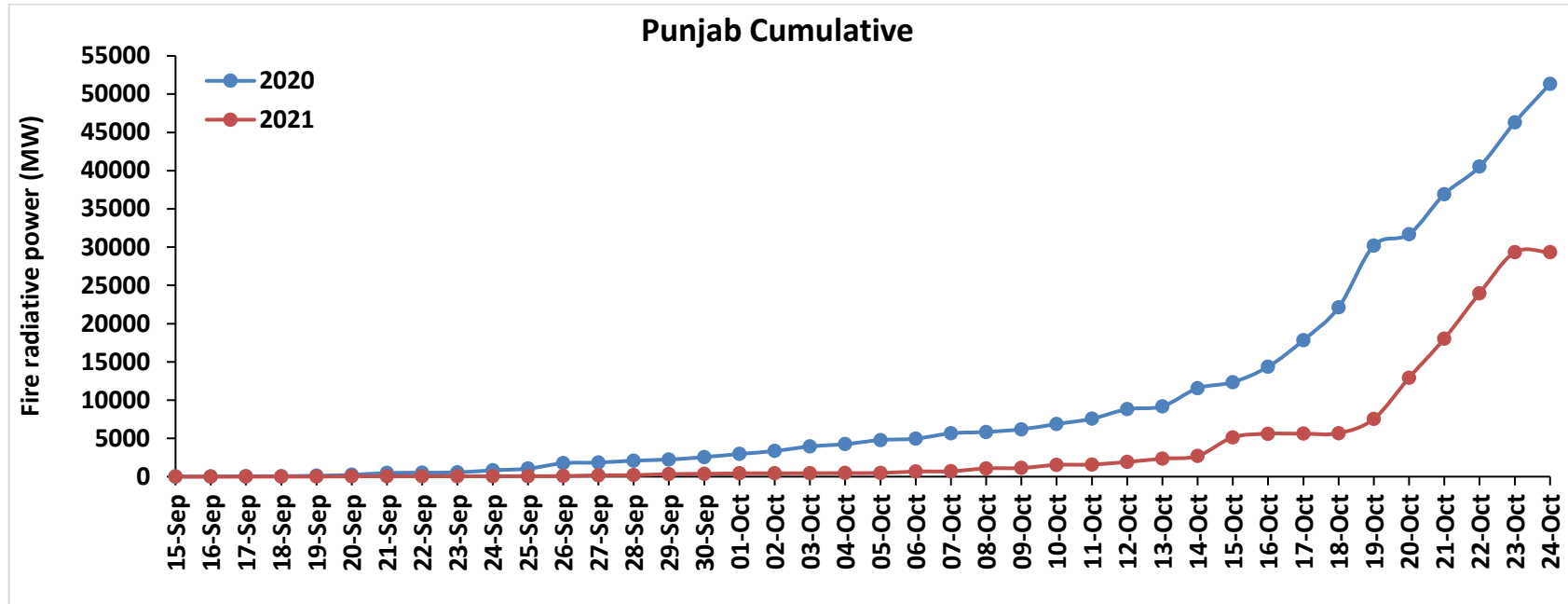
Madhya Pradesh Cumulative

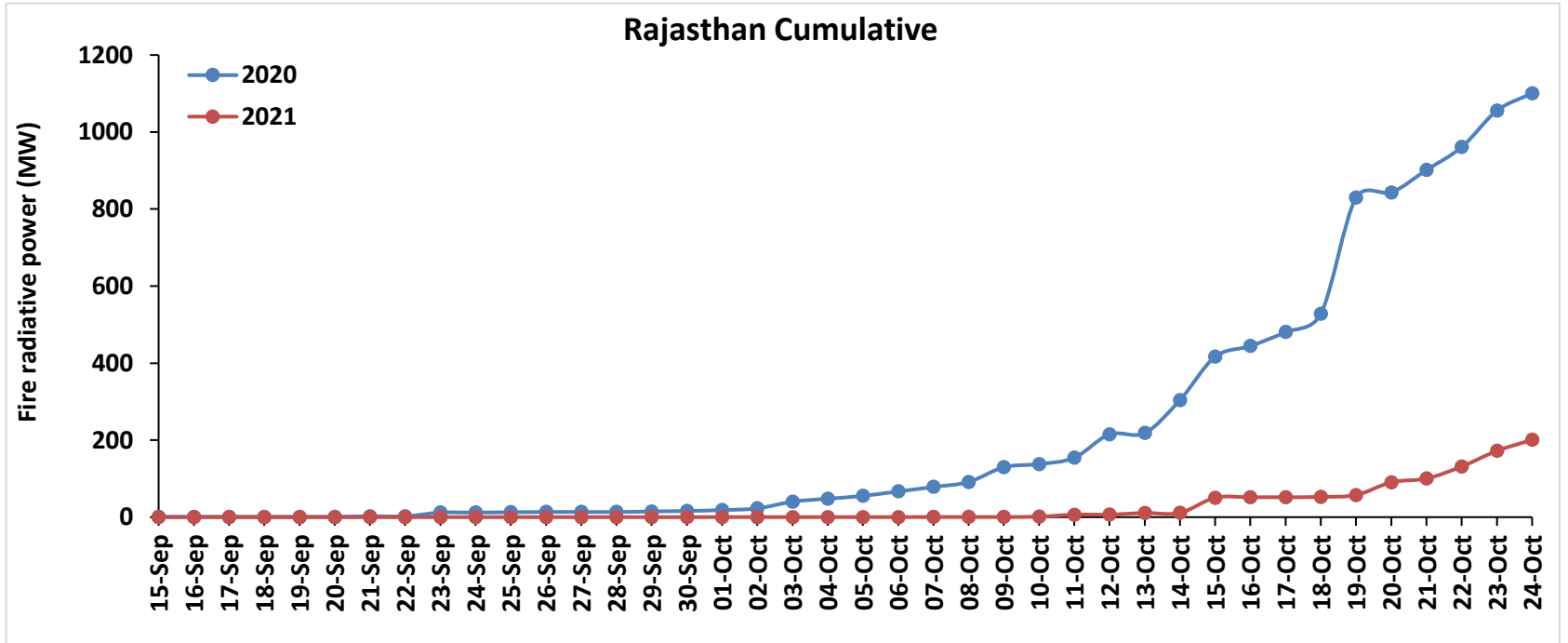
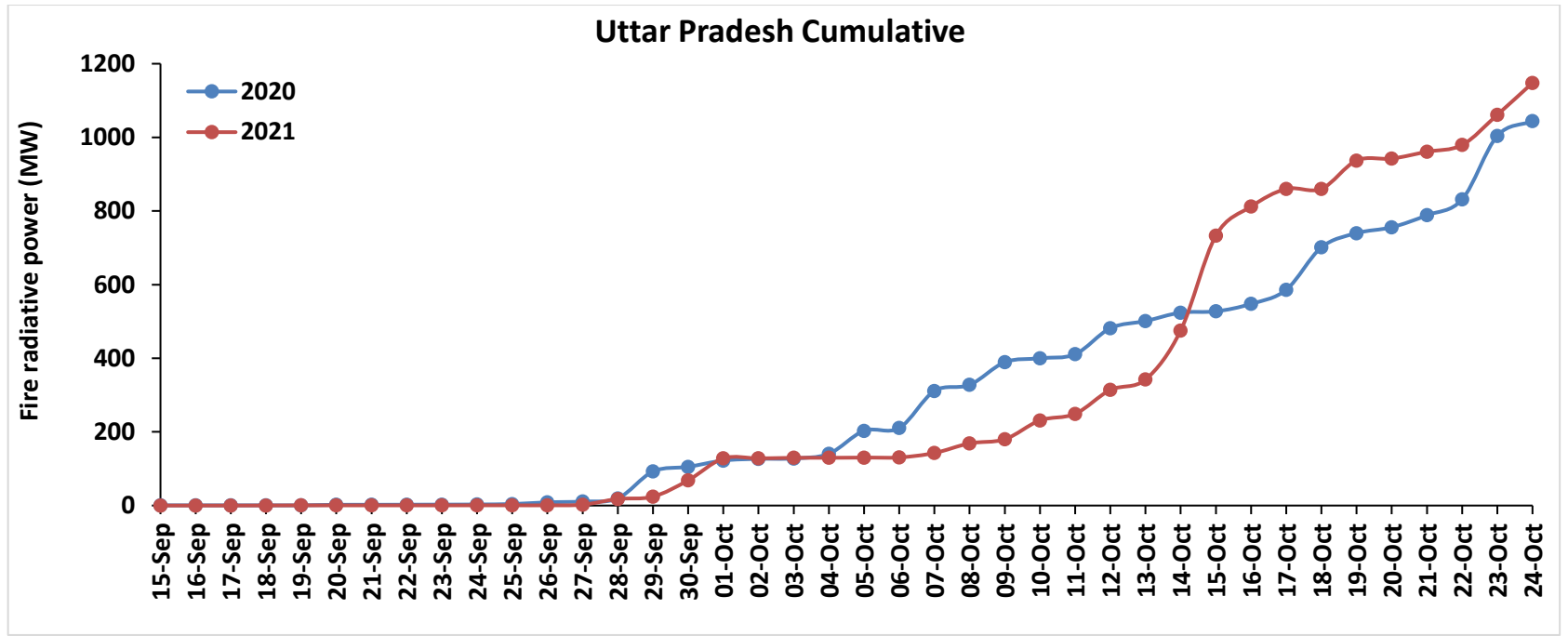


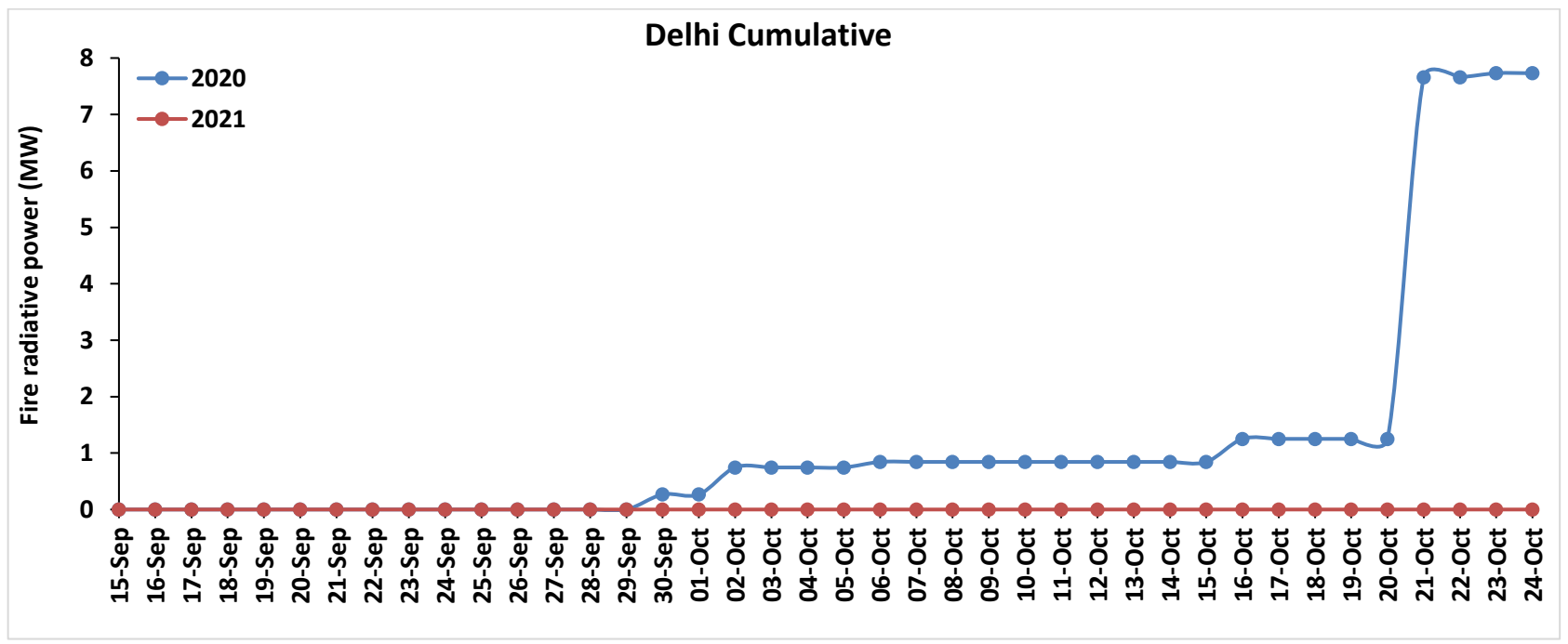
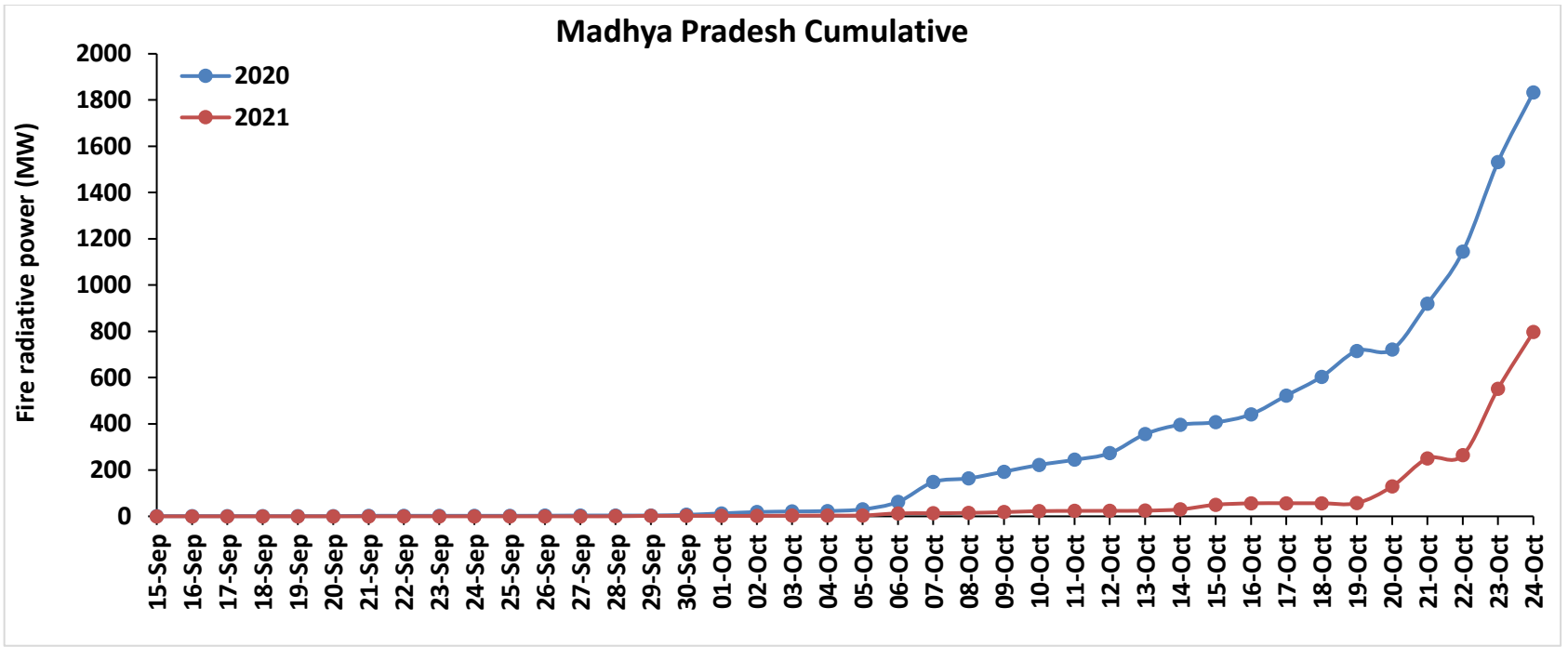
Delhi Cumulative



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

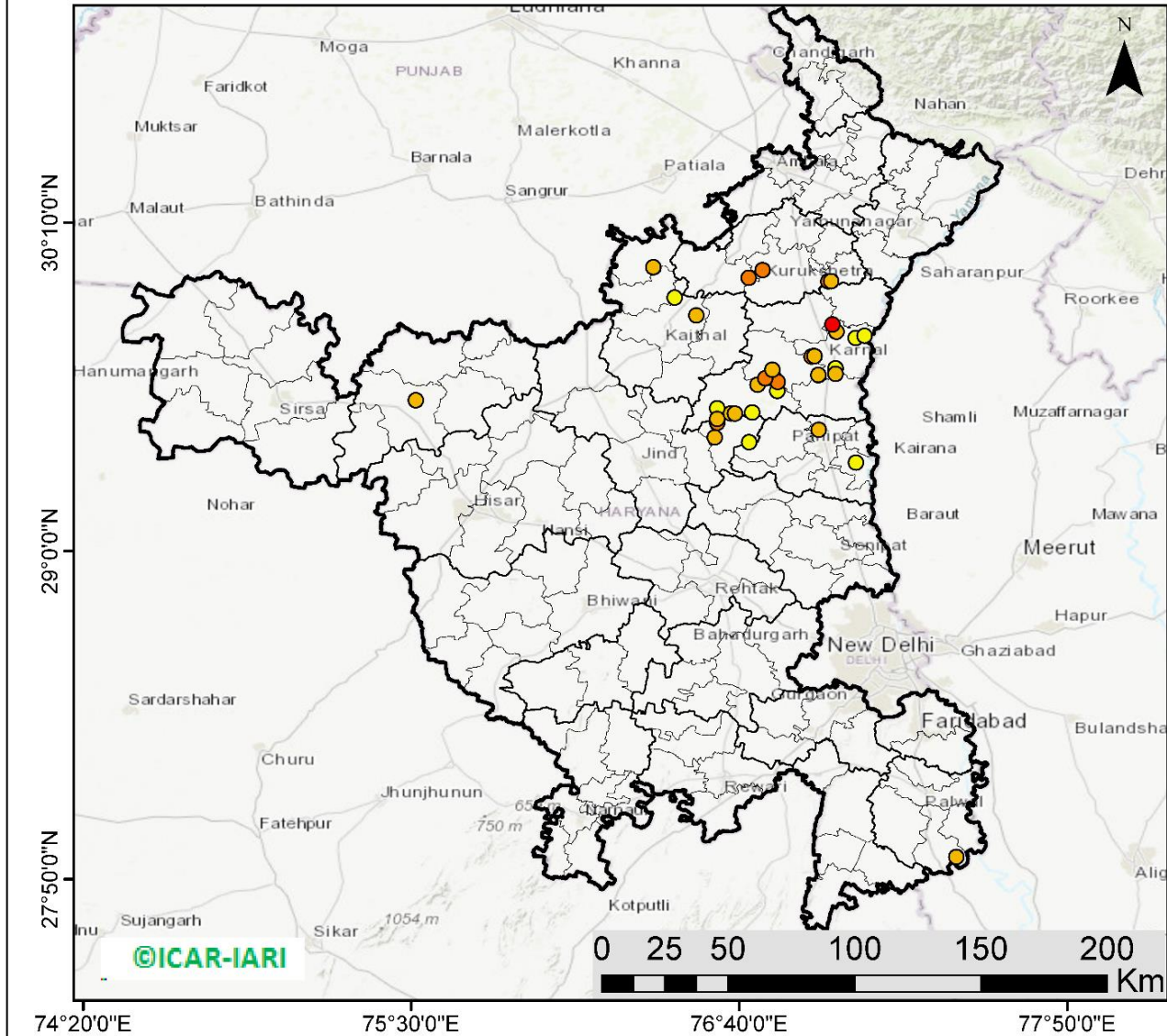






Haryana

RICE RESIDUE BURNING IN HARYANA



38 burning events detected in Haryana on **24th October 2021**

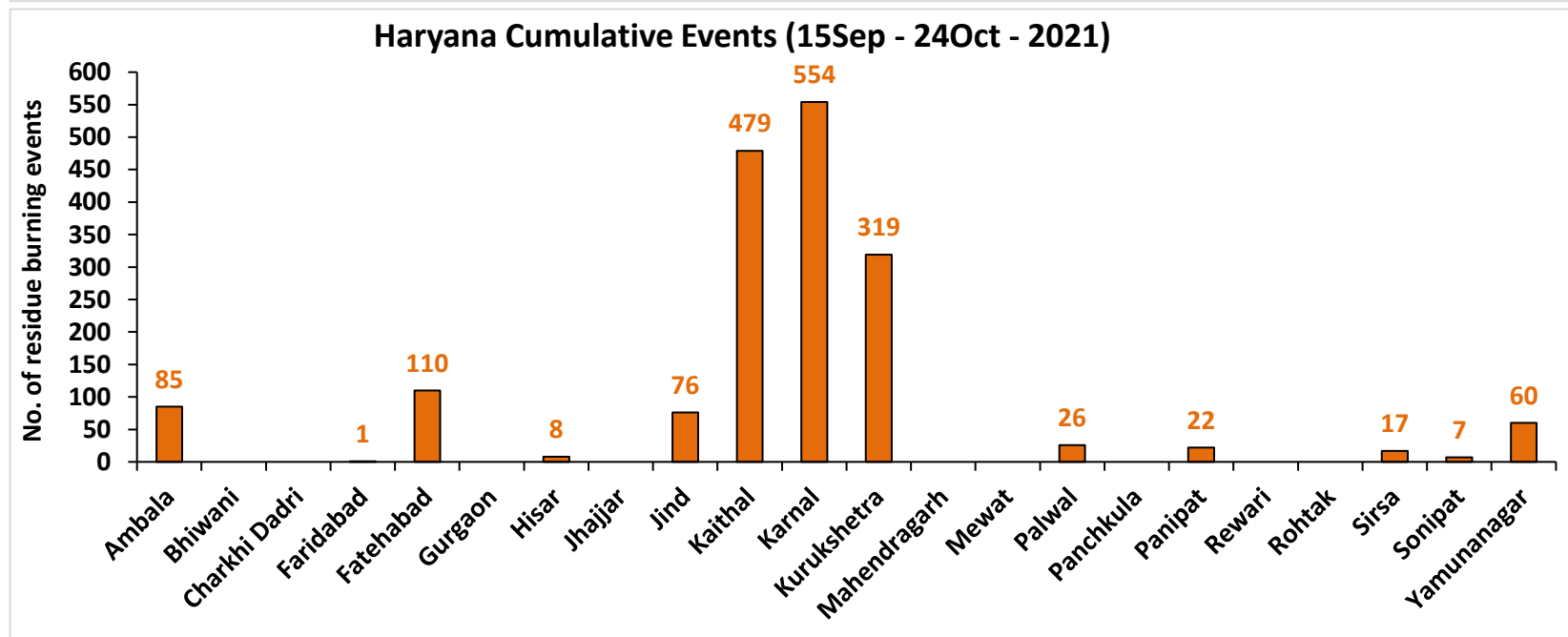
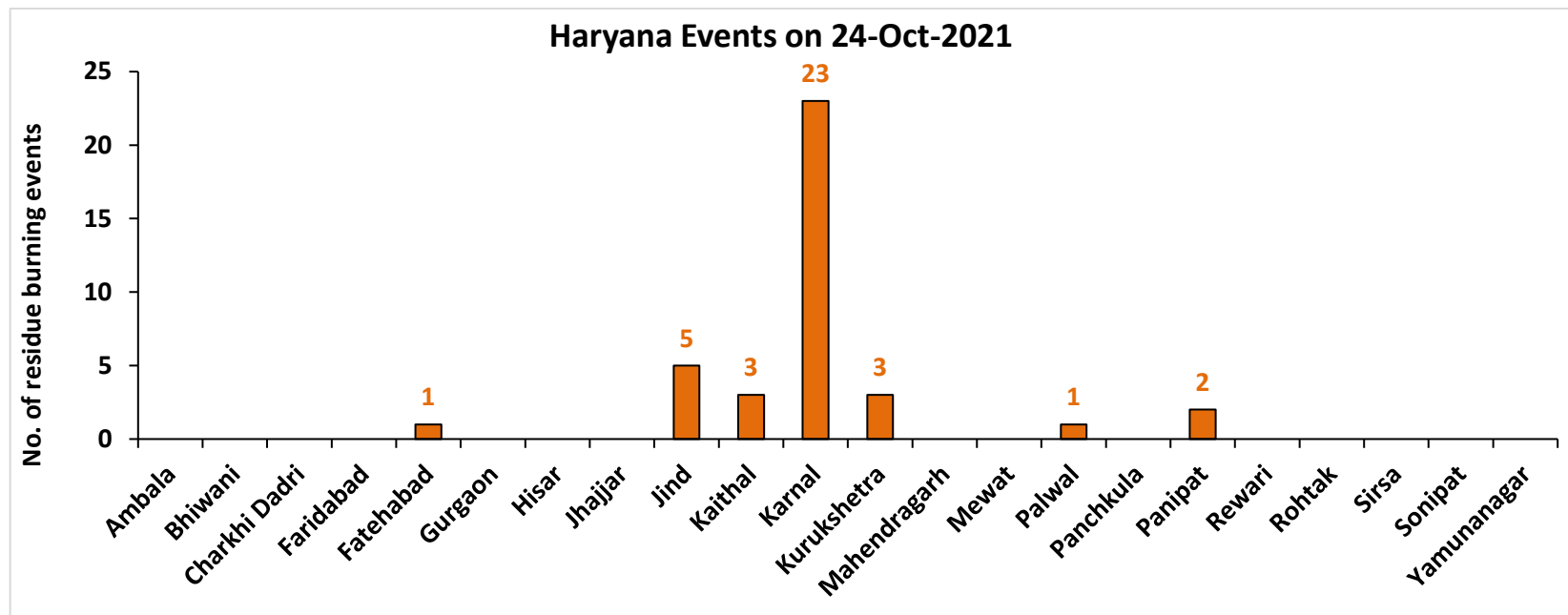
Fire Intensity (W/m²)

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



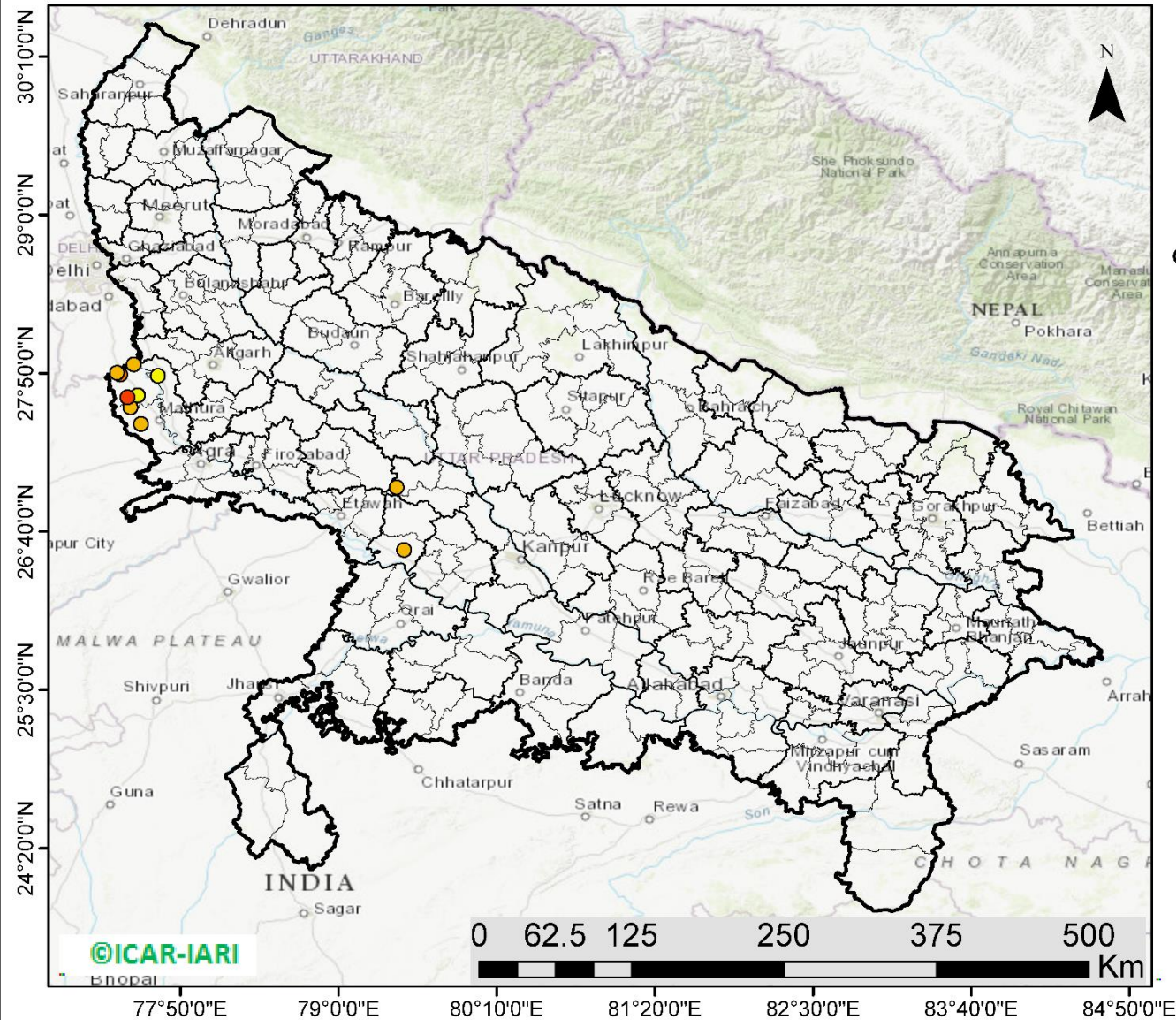
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Haryana (15 Sep - 24 Oct-2021)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



11 burning events detected in Uttar Pradesh on **24th October 2021**

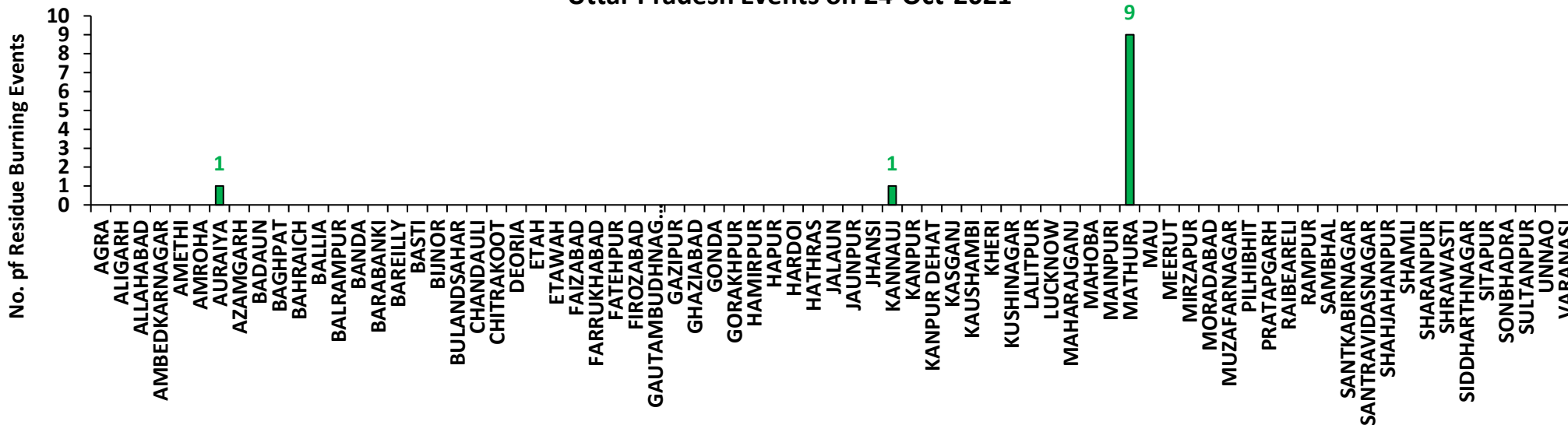
Fire Intensity (W/m²)

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

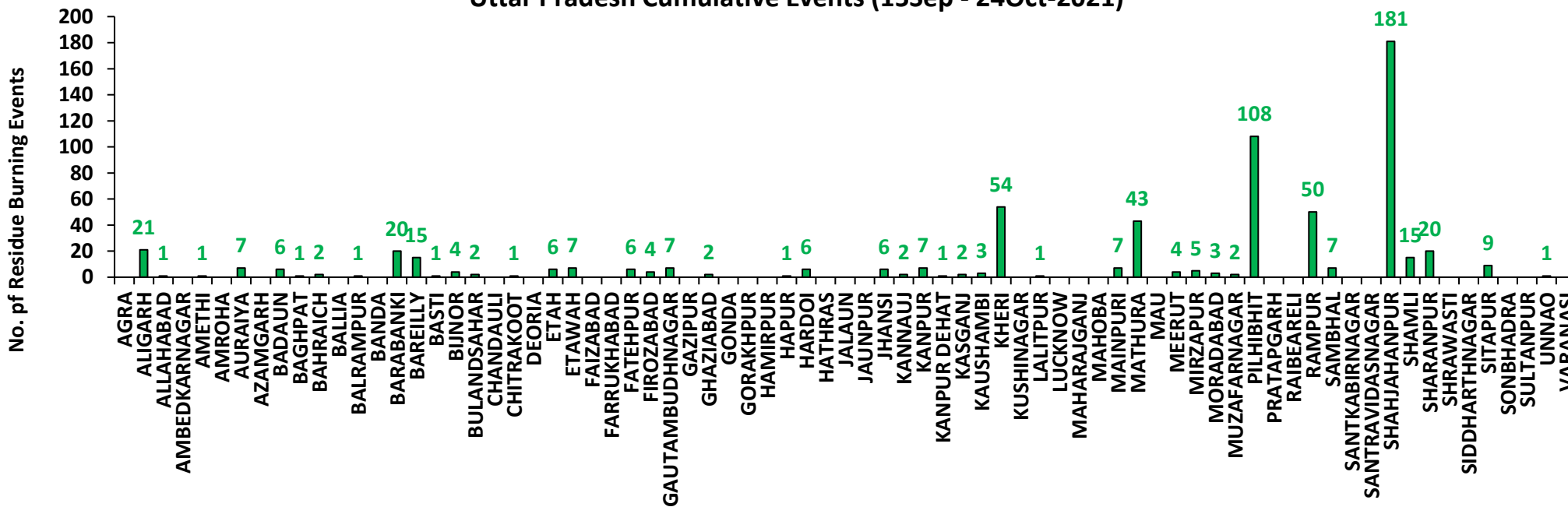
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15 Sep - 24 Oct-2021)

Uttar Pradesh Events on 24-Oct-2021

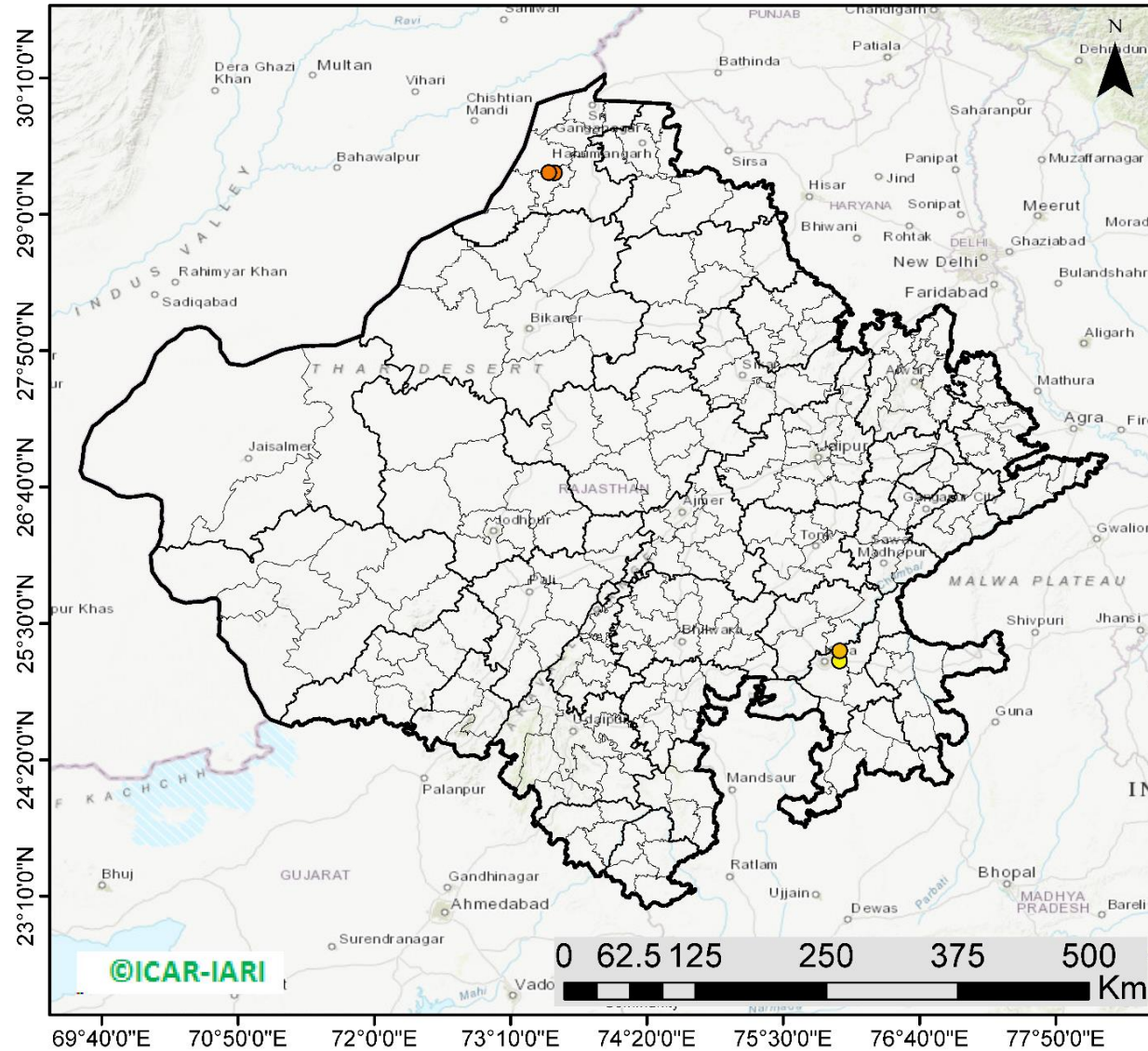


Uttar Pradesh Cumulative Events (15Sep - 24Oct-2021)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



04 burning events
detected in Rajasthan on
24th October 2021

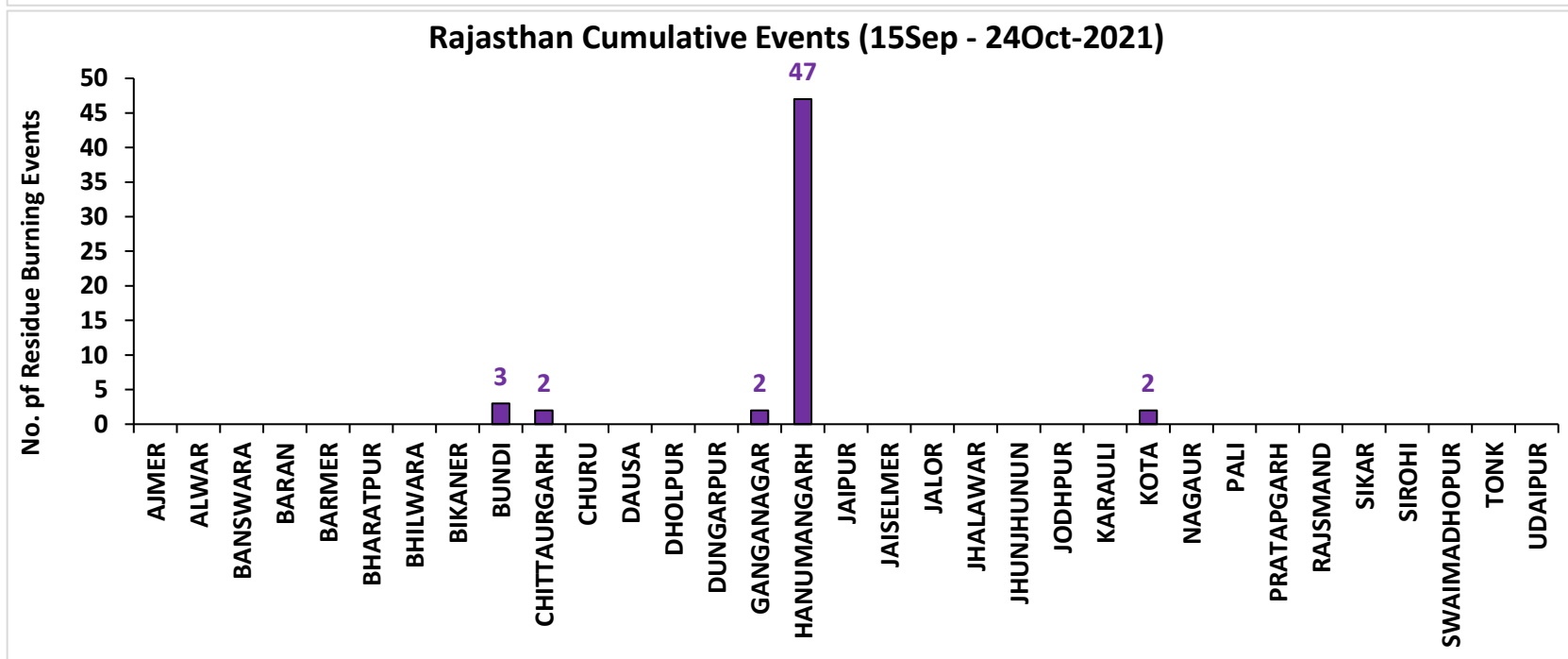
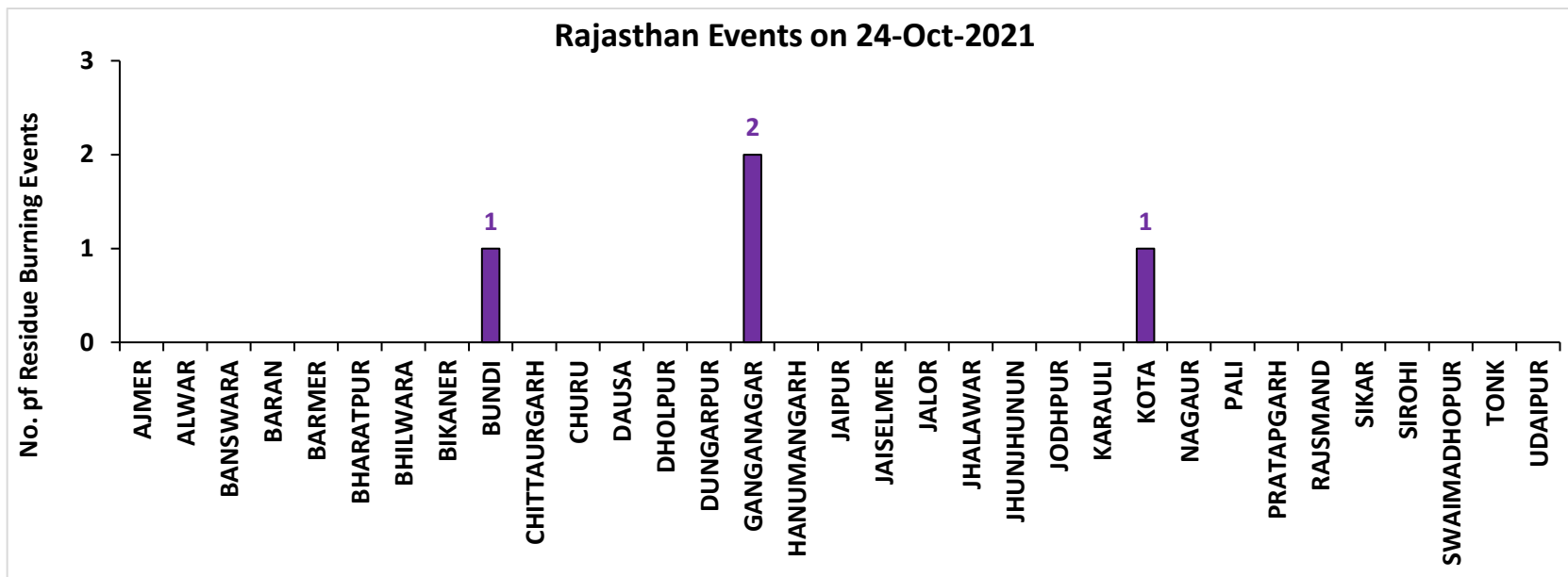
Fire Intensity (W/m²)

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



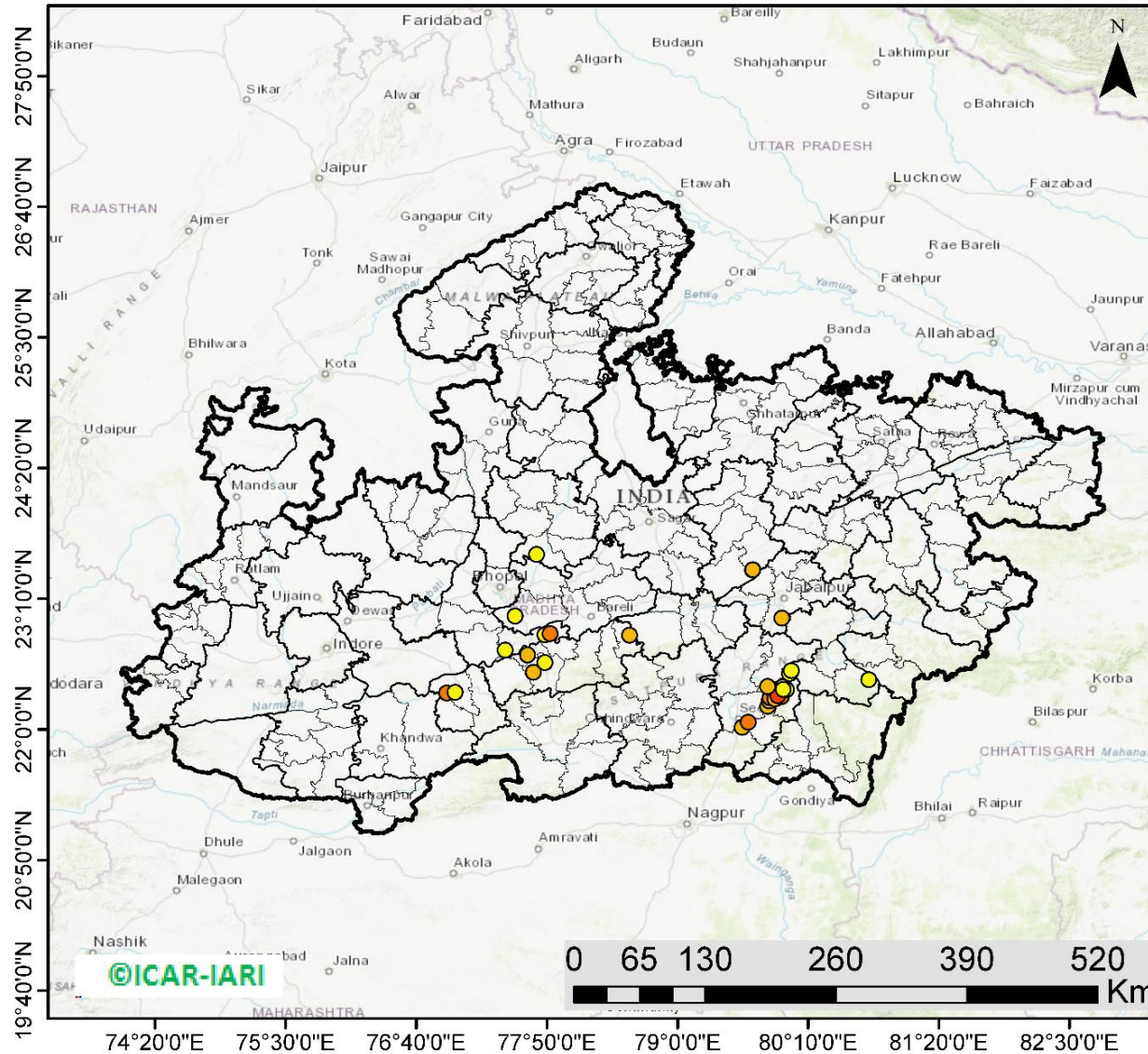
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15 Sep - 24 Oct-2021)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



34 burning events detected in MP on 24th October 2021

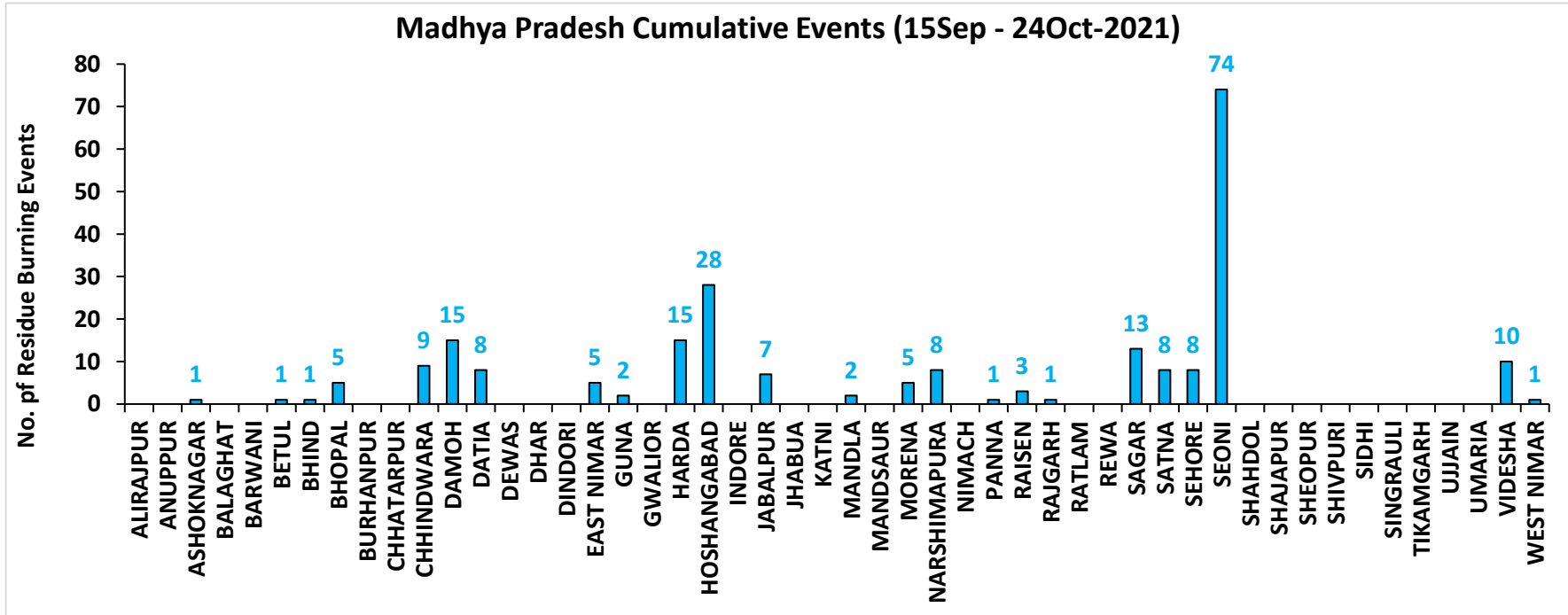
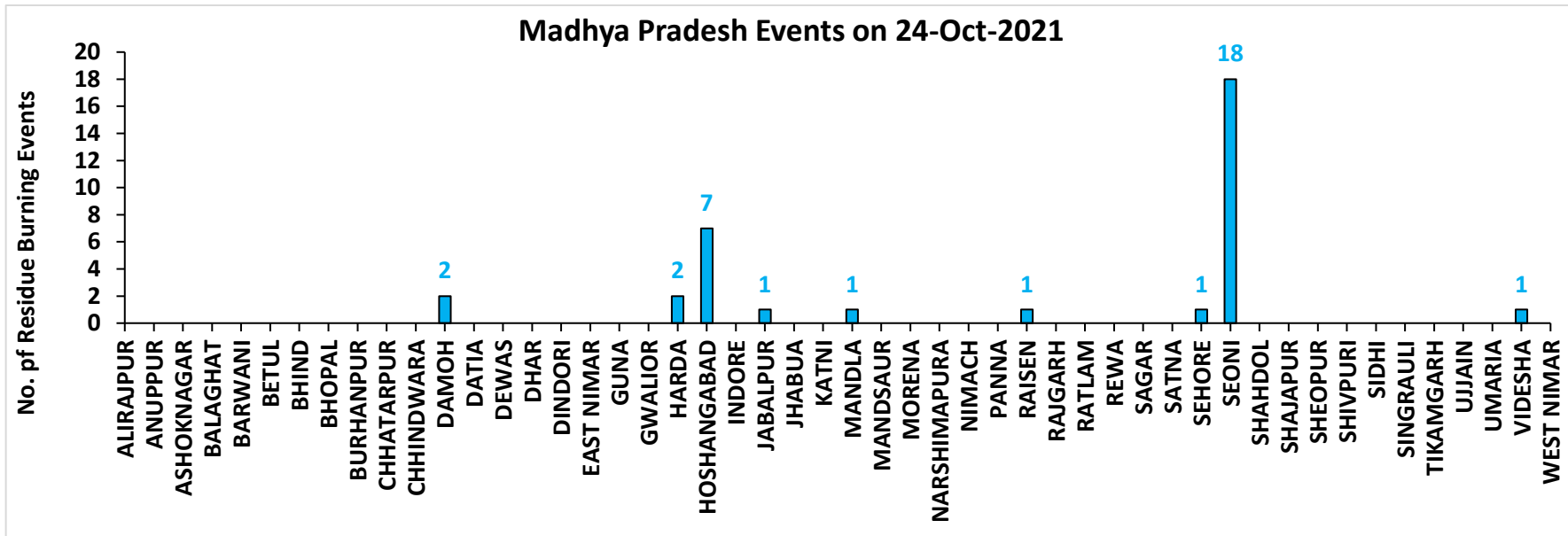
Fire Intensity (W/m²)

- 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 Madhya Pradesh (15 Sep - 24 Oct-2021)



District-wise cumulative number of residues burning events detected in 2020 and 2021

(Period: 15 September - 24 October)

(a) Punjab

District	15 Sep – 24 Oct	
	2020	2021
AMRITSAR	2343	945
BARNALA	81	47
BATHINDA	197	71
FARIDKOT	787	285
FATEHGARH SAHIB	468	286
FAZILKA	229	82
FIROZPUR	1884	394
GURDASPUR	1215	394
HOSHIARPUR	200	58
JALANDHAR	354	273
KAPURTHALA	771	391
LUDHIANA	373	389
MANSA	132	32
MOGA	282	131
MUKTSAR	254	85
PATHANKOT	7	0
PATIALA	1323	500
RUPNAGAR	64	46
SANGRUR	470	146
SAS NAGAR (MOHALI)	75	54
SBS NAGAR	27	34
TARN TARAN	3269	1415
Total	14805	6058

(b) Haryana

District	15 Sep – 24 Oct	
	2020	2021
AMBALA	197	85
BHIWANI	0	0
CHARKHI DADRI	0	0
FARIDABAD	1	1
FATEHABAD	99	110
GURGAON	0	0
HISAR	10	8
JHAJJAR	1	0
JIND	51	76
KAITHAL	332	479
KARNAL	413	554
KURUKSHETRA	338	319
MAHENDRAGARH	0	0
MEWAT	0	0
PALWAL	27	26
PANCHKULA	0	0
PANIPAT	12	22
REWARI	0	0
ROHTAK	2	0
SIRSA	32	17
SONIPAT	15	7
YAMUNANAGAR	87	60
Total	1617	1764

(c) Uttar Pradesh

District	15 Sep – 24 Oct							
	2020	2021	GAUTAMBUDHNAGAR	6	7	MUZAFARNAGAR	3	2
AGRA	2	0	GAZIPUR	0	0	PILHIBHIT	10	108
ALIGARH	50	21	GHAZIABAD	3	2	PRATAPGARH	4	0
ALLAHABAD	0	1	GONDA	0	0	RAIBEARELI	1	0
AMBEDKARNAGAR	0	0	GORAKHPUR	1	0	RAMPUR	55	50
AMETHI	0	1	HAMIRPUR	1	0	SAMBHAL	7	7
AMROHA	2	0	HAPUR	7	1	SANTKABIRNAGAR	0	0
AURAIYA	19	7	HARDOI	19	6	SANTRAVIDASNAGAR	0	0
AZAMGARH	0	0	HATHRAS	0	0	SHAHJAHANPUR	51	181
BADAUN	2	6	JALAUN	0	0	SHAMLI	21	15
BAGHPAT	4	1	JAUNPUR	0	0	SHARANPUR	44	20
BAHRAICH	20	2	JHANSI	26	6	SHRAWASTI	8	0
BALLIA	0	0	KANNAUJ	6	2	SIDDHARTHANAGAR	0	0
BALRAMPUR	5	1	KANPUR	5	7	SITAPUR	21	9
BANDA	0	0	KANPUR DEHAT	15	1	SONBHADRA	0	0
BARABANKI	21	20	KASGANJ	2	2	SULTANPUR	1	0
BAREILLY	25	15	KAUSHAMBI	14	3	UNNAO	6	1
BASTI	3	1	KHERI	50	54	VARANASI	1	0
BIJNOR	6	4	KUSHINAGAR	0	0	Total	733	653
BULANDSAHAR	16	2	LALITPUR	0	1			
CHANDAULI	0	0	LUCKNOW	2	0			
CHITRAKOOT	0	1	MAHARAJGANJ	0	0			
DEORIA	0	0	MAHOBA	12	0			
ETAH	12	6	MAINPURI	15	7			
ETAWAH	8	7	MATHURA	49	43			
FAIZABAD	3	0	MAU	0	0			
FARRUKHABAD	1	0	MEERUT	16	4			
FATEHPUR	26	6	MIRZAPUR	6	5			
FIROZABAD	12	4	MORADABAD	8	3			

(d) Delhi

District	15 Sep – 24 Oct	
	2020	2021
CENTRAL	0	0
EAST	0	0
NEW DELHI	0	0
NORTH	2	0
NORTH EAST	0	0
NORTH WEST DELHI	3	0
SHAHADRA	0	0
SOUTH	1	0
SOUTH EAST	0	0
SOUTH WEST DELHI	0	0
WEST DELHI	1	0
Total	7	0

(e) Rajasthan

District	15 Sep – 24 Oct	
	2020	2021
AJMER	2	0
ALWAR	2	0
BANSWARA	0	0
BARAN	106	0
BARMER	2	0
BHARATPUR	2	0
BHILWARA	4	0
BIKANER	1	0
BUNDI	25	3
CHITTAURGARH	0	2
CHURU	0	0
DAUSA	0	0
DHOLPUR	0	0
DUNGARPUR	0	0
GANGANAGAR	4	2
HANUMANGARH	216	47
JAIPUR	2	0
JAISELMER	2	0
JALOR	0	0
JHALAWAR	1	0
JHUNJHUNUN	1	0
JODHPUR	1	0
KARALI	1	0
KOTA	42	2
NAGPUR	0	0
PALI	2	0
PRATAPGARH	4	0
RAJSMAND	0	0
SIKAR	0	0
SIROHI	1	0
SWAIMADHOPUR	10	0
TONK	3	0
UDAIPUR	0	0
Total	434	56

(f) Madhya Pradesh

District	15 Sep – 24 Oct				
	2020	2021			
			PANNA	8	1
ALIRAJPUR	0	0	RAISEN	73	3
ANUPPUR	0	0	RAJGARH	7	1
ASHOKNAGAR	42	1	RATLAM	0	0
BALAGHAT	0	0	REWA	19	0
BARWANI	0	0	SAGAR	19	13
BETUL	4	1	SATNA	40	8
BHIND	14	1	SEHORE	19	8
BHOPAL	12	5	SEONI	121	74
BURHANPUR	0	0	SHAHDOL	0	0
CHHATARPUR	4	0	SHAJAPUR	5	0
CHHINDWARA	15	9	SHEOPUR	41	0
DAMOH	38	15	SHIVPURI	22	0
DATIA	127	8	SIDHI	0	0
DEWAS	3	0	SINGRAULI	0	0
DHAR	22	0	TIKAMGARH	1	0
DINDORI	0	0	UJJAIN	5	0
EAST NIMAR	10	5	UMARIA	0	0
GUNA	26	2	VIDESHA	73	10
GWALIOR	115	0	WEST NIMAR	16	1
HARDA	10	15	Total	1179	231
HOSHANGABAD	155	28			
INDORE	2	0			
JABALPUR	36	7			
JHABUA	0	0			
KATNI	21	0			
MANDLA	5	2			
MANDSAUR	3	0			
MORENA	23	5			
NARSHIMAPURA	23	8			
NIMACH	0	0			

State-wise and date-wise number of paddy residue burning events detected in 2020 and 2021
(Period: 15 September – 24 October)

Number of Paddy Residue Burning Events Detected

	Punjab		Haryana		Uttar Pradesh		Delhi		Rajasthan		Madhya Pradesh	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
15-Sep	5	0	2	0	1	0	0	0	1	0	2	0
16-Sep	0	2	1	0	0	0	0	0	0	0	0	0
17-Sep	5	0	3	0	0	0	0	0	0	0	0	0
18-Sep	17	9	0	0	0	1	0	0	0	0	0	0
19-Sep	30	5	2	0	0	1	0	0	0	0	0	0
20-Sep	67	8	6	0	2	0	0	0	0	0	0	0
21-Sep	54	0	2	0	1	0	0	0	1	0	2	0
22-Sep	34	0	1	0	1	0	0	0	0	0	0	0
23-Sep	49	0	0	0	1	0	0	0	1	0	0	0
24-Sep	78	5	0	0	1	1	0	0	0	0	0	0
25-Sep	184	11	11	0	5	0	0	0	1	0	0	0
26-Sep	190	19	5	0	8	0	0	0	1	0	2	0
27-Sep	78	37	8	0	4	1	0	0	0	0	1	0
28-Sep	55	28	6	1	1	6	0	0	0	0	1	1
29-Sep	63	64	9	4	6	10	0	0	3	0	0	4
30-Sep	116	27	22	2	13	13	1	0	1	0	5	0
01-Oct	165	13	15	4	7	13	0	0	4	1	13	0
02-Oct	141	0	30	2	12	0	1	0	7	0	12	0
03-Oct	110	9	8	6	4	3	0	0	9	0	5	1
04-Oct	162	23	29	2	8	0	0	0	15	0	4	2
05-Oct	161	18	17	3	14	2	0	0	14	0	13	1
06-Oct	171	42	30	0	12	1	1	0	16	0	37	1
07-Oct	197	72	32	11	41	13	0	0	14	1	31	1
08-Oct	95	108	29	27	25	11	0	0	11	0	17	2
09-Oct	121	114	20	39	15	20	0	0	12	0	15	4
10-Oct	232	150	33	95	9	54	0	0	14	1	18	10
11-Oct	377	64	90	51	23	28	0	0	21	7	32	2
12-Oct	388	97	69	51	46	23	0	0	24	1	44	1

13-Oct	266	132	47	91	36	42	0	0	7	5	21	2
14-Oct	605	229	69	98	9	68	0	0	16	1	15	11
15-Oct	449	660	106	363	15	149	0	0	9	8	8	27
16-Oct	654	429	80	176	21	121	1	0	12	2	23	13
17-Oct	1172	14	143	0	38	39	0	0	26	0	63	1
18-Oct	938	57	166	1	76	0	0	0	37	2	88	0
19-Oct	1080	496	72	55	43	5	0	0	27	5	49	1
20-Oct	890	788	62	155	31	1	0	0	26	4	9	21
21-Oct	1392	597	101	131	25	5	2	0	32	2	112	30
22-Oct	1665	1111	128	140	32	3	0	0	29	5	183	29
23-Oct	1438	620	106	218	84	8	1	0	23	7	204	32
24-Oct	911	0	57	38	63	11	0	0	20	4	150	34
Total	14805	6058	1617	1764	733	653	7	0	434	56	1179	231

Details of residue burning events in Haryana on 24-Oct-2021

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	FATEHABAD	FATEHABAD	AQUA	29.53461	75.51699	10/24/2021	13:41	D	6.45
2	JIND	SAFIDON	S-NPP	29.38627	76.70206	10/24/2021	13:58	D	4.53
3	JIND	SAFIDON	S-NPP	29.45455	76.58885	10/24/2021	13:58	D	11.17
4	JIND	SAFIDON	AQUA	29.40322	76.58005	10/24/2021	13:41	D	9.37
5	JIND	SAFIDON	AQUA	29.46854	76.58874	10/24/2021	13:41	D	7.60
6	JIND	SAFIDON	AQUA	29.48775	76.65184	10/24/2021	13:41	D	7.86
7	KAITHAL	GUHLA	S-NPP	30.00819	76.36166	10/24/2021	13:58	D	8.26
8	KAITHAL	KAITHAL	S-NPP	29.83711	76.51474	10/24/2021	13:58	D	6.36
9	KAITHAL	KAITHAL	S-NPP	29.89989	76.43736	10/24/2021	13:58	D	4.80
10	KARNAL	ASSANDH	S-NPP	29.48884	76.63689	10/24/2021	13:58	D	5.69
11	KARNAL	ASSANDH	S-NPP	29.49155	76.71354	10/24/2021	13:58	D	2.83
12	KARNAL	ASSANDH	S-NPP	29.50682	76.58881	10/24/2021	13:58	D	4.57
13	KARNAL	ASSANDH	S-NPP	29.56847	76.80276	10/24/2021	13:58	D	3.73
14	KARNAL	ASSANDH	S-NPP	29.61557	76.77089	10/24/2021	13:58	D	3.86
15	KARNAL	ASSANDH	AQUA	29.59048	76.73215	10/24/2021	13:41	D	5.42
16	KARNAL	ASSANDH	AQUA	29.61264	76.75957	10/24/2021	13:41	D	11.36
17	KARNAL	CHIRAO	S-NPP	29.61313	76.79209	10/24/2021	13:58	D	6.11
18	KARNAL	CHIRAO	S-NPP	29.61445	76.79066	10/24/2021	13:58	D	8.14
19	KARNAL	CHIRAO	S-NPP	29.62423	76.94942	10/24/2021	13:58	D	2.38
20	KARNAL	CHIRAO	S-NPP	29.62451	76.94827	10/24/2021	13:58	D	5.38
21	KARNAL	CHIRAO	S-NPP	29.69193	76.92936	10/24/2021	13:58	D	4.91
22	KARNAL	CHIRAO	AQUA	29.60049	76.80392	10/24/2021	13:41	D	10.50
23	KARNAL	CHIRAO	AQUA	29.64375	76.78537	10/24/2021	13:41	D	5.62
24	KARNAL	CHIRAO	AQUA	29.69065	76.92439	10/24/2021	13:41	D	12.94
25	KARNAL	INDRI	AQUA	29.95716	76.98360	10/24/2021	13:41	D	11.25
26	KARNAL	KARNAL	S-NPP	29.64871	77.00992	10/24/2021	13:58	D	4.44
27	KARNAL	KARNAL	S-NPP	29.75662	77.08122	10/24/2021	13:58	D	4.26
28	KARNAL	KARNAL	S-NPP	29.76422	77.11326	10/24/2021	13:58	D	4.74
29	KARNAL	KARNAL	S-NPP	29.77820	77.01311	10/24/2021	13:58	D	7.89
30	KARNAL	KARNAL	S-NPP	29.80472	76.99908	10/24/2021	13:58	D	20.15

31	KARNAL	KARNAL	AQUA	29.62895	77.00978	10/24/2021	13:41	D	8.25
32	KARNAL	KARNAL	AQUA	29.69208	76.93470	10/24/2021	13:41	D	5.12
33	KURUKSHETRA	LADWA	AQUA	29.95859	76.99397	10/24/2021	13:41	D	7.57
34	KURUKSHETRA	PEHOWA	S-NPP	29.97044	76.70114	10/24/2021	13:58	D	11.15
35	KURUKSHETRA	THANESAR	S-NPP	29.99806	76.75033	10/24/2021	13:58	D	10.61
36	PALWAL	HODAL	S-NPP	27.91198	77.43968	10/24/2021	13:58	D	7.26
37	PANIPAT	BAPPAULI	S-NPP	29.31356	77.08203	10/24/2021	13:58	D	1.47
38	PANIPAT	PANIPAT	S-NPP	29.43037	76.94975	10/24/2021	13:58	D	5.45

Details of residue burning events in Uttar Pradesh on 24-Oct-2021

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	AURAIYA	AURAIYA	AQUA	26.53132	79.48399	10/24/2021	13:39	D	5.98
2	KANNAUJ	CHHIBRAMAU	S-NPP	26.99236	79.42897	10/24/2021	13:58	D	6.77
3	MATHURA	CHHATA	S-NPP	27.58176	77.46533	10/24/2021	13:58	D	9.13
4	MATHURA	CHHATA	S-NPP	27.67006	77.52140	10/24/2021	13:58	D	2.39
5	MATHURA	CHHATA	S-NPP	27.67098	77.51904	10/24/2021	13:58	D	3.59
6	MATHURA	CHHATA	S-NPP	27.81387	77.66733	10/24/2021	13:58	D	4.99
7	MATHURA	CHHATA	S-NPP	27.82425	77.38918	10/24/2021	13:58	D	13.28
8	MATHURA	CHHATA	S-NPP	27.83591	77.36653	10/24/2021	13:58	D	6.42
9	MATHURA	CHHATA	S-NPP	27.89817	77.48993	10/24/2021	13:58	D	6.12
10	MATHURA	CHHATA	AQUA	27.65609	77.44362	10/24/2021	13:41	D	18.77
11	MATHURA	MATHURA	AQUA	27.45831	77.54271	10/24/2021	13:41	D	9.03

Details of residue burning events in Rajasthan on 24-Oct-2021

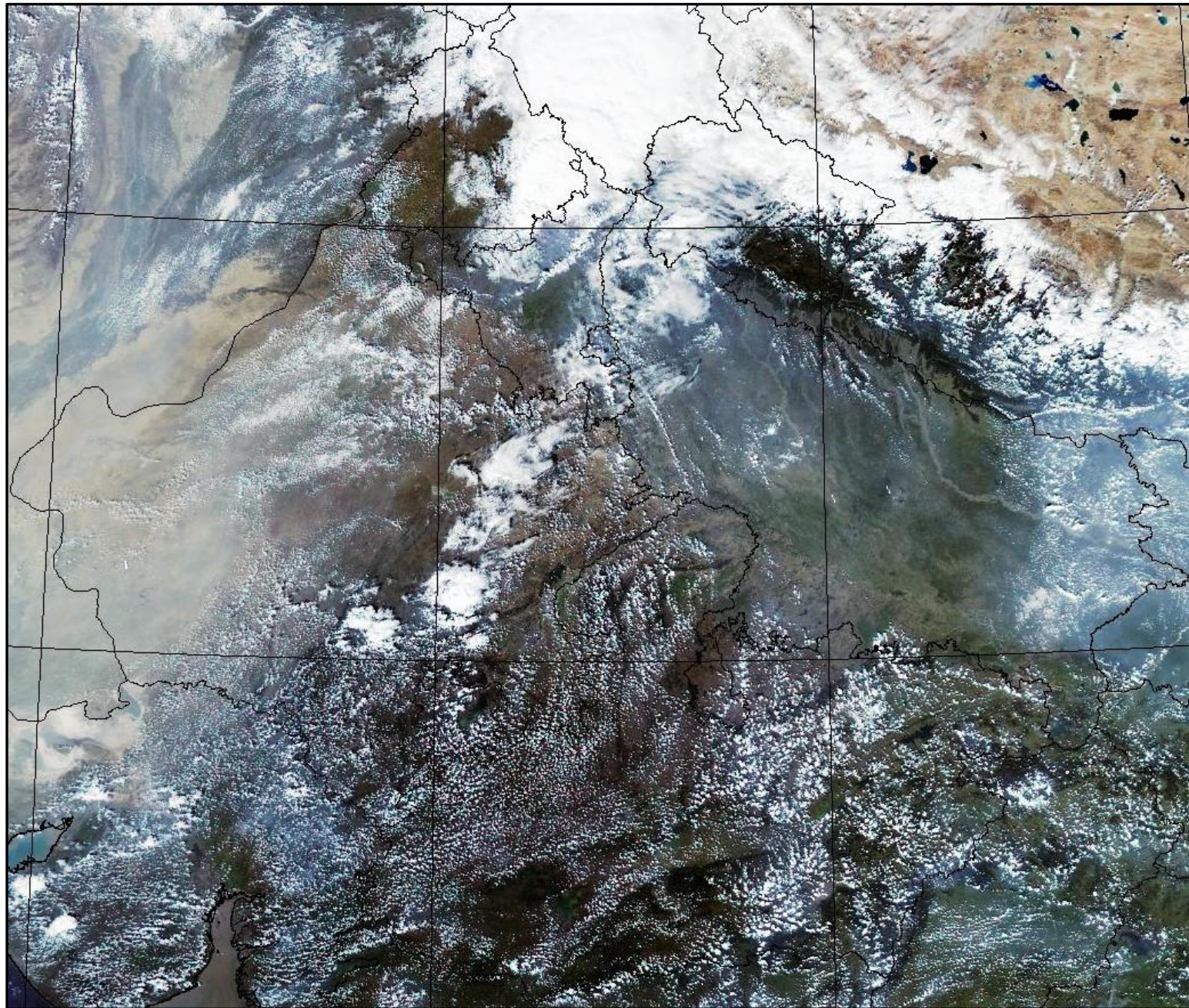
S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	BUNDI	KESHORAIPTAN	S-NPP	25.26313	75.98456	10/24/2021	13:56	D	5.01
2	GANGANAGAR	RAISINGHNAGAR	AQUA	29.35397	73.54326	10/24/2021	13:41	D	11.39
3	GANGANAGAR	RAISINGHNAGAR	AQUA	29.35572	73.49368	10/24/2021	13:41	D	10.64
4	KOTA	LADPURA	S-NPP	25.17646	75.98319	10/24/2021	13:56	D	1.52

Details of residue burning events in Madhya Pradesh on 24-Oct-2021

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	DAMOH	TENDUKHERA	S-NPP	23.42165	79.66991	10/24/2021	13:56	D	5.65
2	DAMOH	TENDUKHERA	S-NPP	23.42277	79.67226	10/24/2021	13:56	D	7.66
3	HARDA	HARDA	AQUA	22.32241	76.93877	10/24/2021	13:39	D	12.02
4	HARDA	HARDA	S-NPP	22.32959	77.01302	10/24/2021	13:56	D	2.94
5	HOSHANGABAD	BABAI	S-NPP	22.84413	77.81540	10/24/2021	13:56	D	4.92
6	HOSHANGABAD	BABAI	S-NPP	22.85373	77.86150	10/24/2021	13:56	D	10.30
7	HOSHANGABAD	BANKHERI	S-NPP	22.83874	78.57101	10/24/2021	13:56	D	7.18
8	HOSHANGABAD	HOSHANGABAD	S-NPP	22.66200	77.65949	10/24/2021	13:56	D	4.46
9	HOSHANGABAD	HOSHANGABAD	S-NPP	22.66288	77.66060	10/24/2021	13:56	D	5.61
10	HOSHANGABAD	ITARSI	S-NPP	22.50835	77.71333	10/24/2021	13:56	D	5.50
11	HOSHANGABAD	ITARSI	S-NPP	22.59505	77.81583	10/24/2021	13:56	D	3.41
12	JABALPUR	JABALPUR	AQUA	22.99265	79.93141	10/24/2021	13:39	D	8.46
13	MANDLA	BACHHIYA	S-NPP	22.44153	80.70849	10/24/2021	13:56	D	2.42
14	RAISEN	GOHARGANJ	S-NPP	23.00990	77.54916	10/24/2021	13:56	D	3.08
15	SEHORE	BUDHNI	S-NPP	22.70666	77.46053	10/24/2021	13:56	D	4.65
16	SEONI	BARGHAT	AQUA	22.06241	79.63177	10/24/2021	13:39	D	13.62
17	SEONI	KEWLARI	AQUA	22.35907	79.93365	10/24/2021	13:39	D	8.69
18	SEONI	KEWLARI	AQUA	22.37829	79.80786	10/24/2021	13:39	D	10.38
19	SEONI	KEWLARI	AQUA	22.37901	79.94120	10/24/2021	13:39	D	9.56
20	SEONI	KEWLARI	AQUA	22.51534	80.01463	10/24/2021	13:39	D	8.39

21	SEONI	KEWLARI	S-NPP	22.27127	79.87345	10/24/2021	13:56	D	9.55
22	SEONI	KEWLARI	S-NPP	22.27129	79.86913	10/24/2021	13:56	D	7.05
23	SEONI	KEWLARI	S-NPP	22.29181	79.92757	10/24/2021	13:56	D	13.25
24	SEONI	KEWLARI	S-NPP	22.29883	79.89543	10/24/2021	13:56	D	17.95
25	SEONI	KEWLARI	S-NPP	22.35254	79.97344	10/24/2021	13:56	D	2.48
26	SEONI	KEWLARI	S-NPP	22.35473	79.94472	10/24/2021	13:56	D	2.14
27	SEONI	KEWLARI	S-NPP	22.38095	79.80534	10/24/2021	13:56	D	9.15
28	SEONI	KEWLARI	S-NPP	22.49697	80.00151	10/24/2021	13:56	D	2.13
29	SEONI	KEWLARI	S-NPP	22.52252	80.01659	10/24/2021	13:56	D	3.56
30	SEONI	SEONI	AQUA	22.01768	79.57697	10/24/2021	13:39	D	5.92
31	SEONI	SEONI	AQUA	22.20375	79.80518	10/24/2021	13:39	D	8.05
32	SEONI	SEONI	AQUA	22.25257	79.81854	10/24/2021	13:39	D	8.97
33	SEONI	SEONI	AQUA	22.28164	79.82457	10/24/2021	13:39	D	13.51
34	VIDESHA	VIDESHA	S-NPP	23.56017	77.74126	10/24/2021	13:56	D	2.35

[AQUA \(MODIS\) Satellite image \(TCC\) of North and Central India Acquired on 24-Oct-2021 at 13:35:00 IST by IARI Ground Station](#)



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)
