

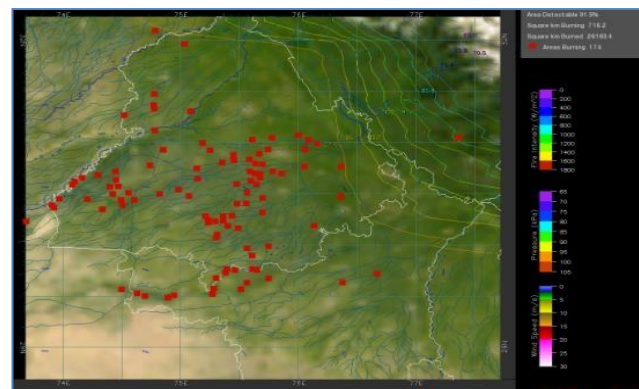
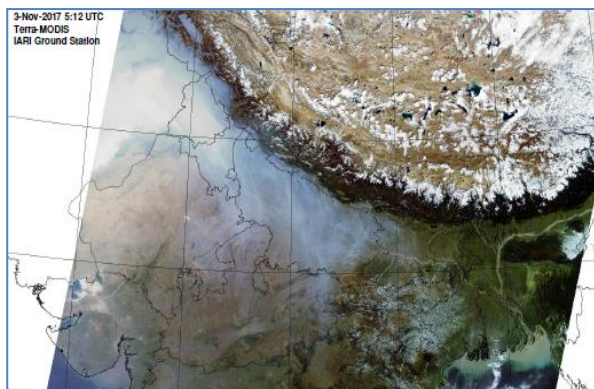


MONITORING PADDY RESIDUE BURNING IN INDIA USING SATELLITE REMOTE SENSING DURING 2021

Bulletin
No. 23

Events Date:
07-Oct-2021

Issued on:
07-Oct-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

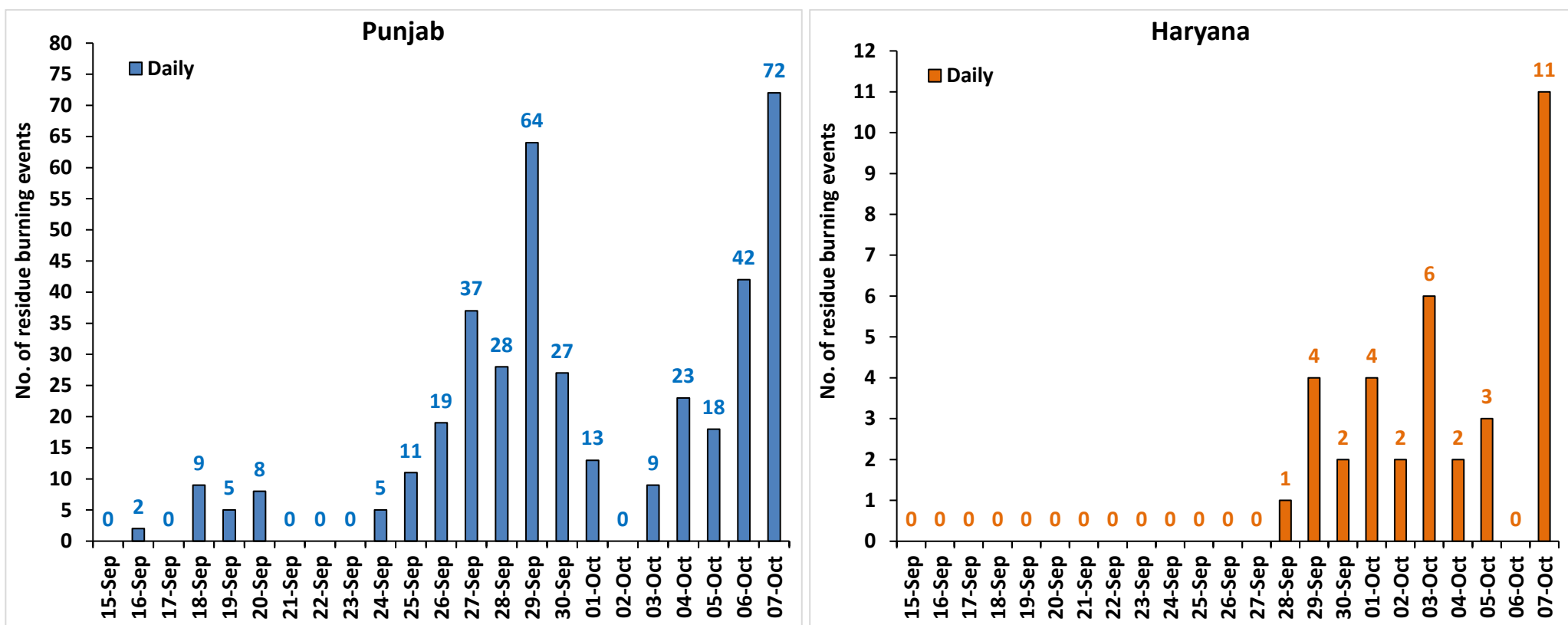
<http://creams.iari.res.in>



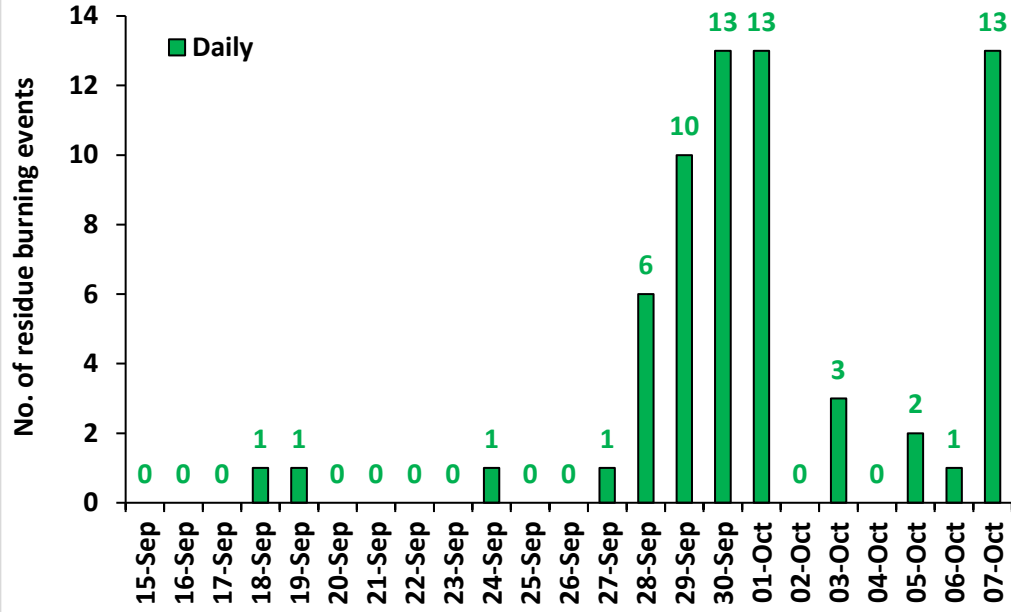
Highlights for 07-October-2021

- 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 **98** residue burning events in the six study States on 07-Oct-2021.
- The state wise events detected on 07-Oct-2021 were **72** in Punjab, **11** in Haryana, **13** in UP, **0** in Delhi, **1** in Rajasthan and **1** in MP.
- Detection of burning events by satellites was hampered due to scattered clouds over Uttar Pradesh and Madhya Pradesh states.

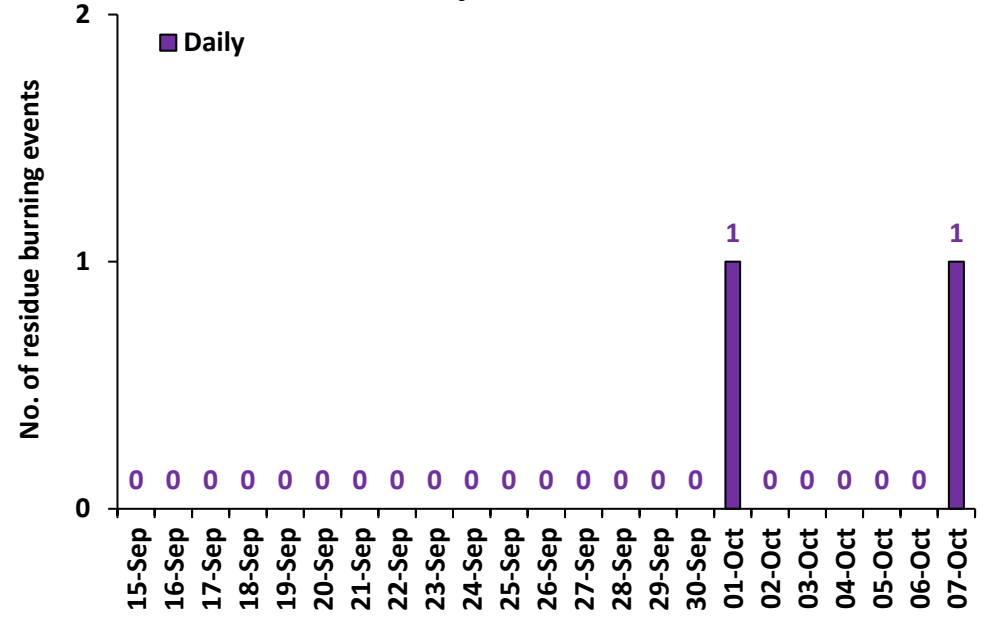
Temporal distribution of rice residue burning events for the study States in 2021



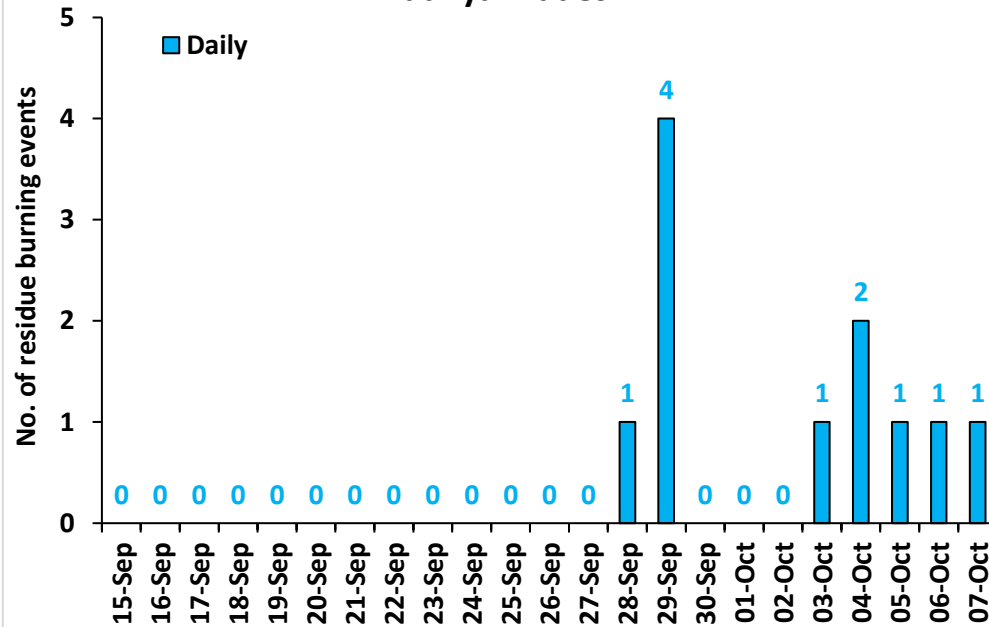
Uttar Pradesh



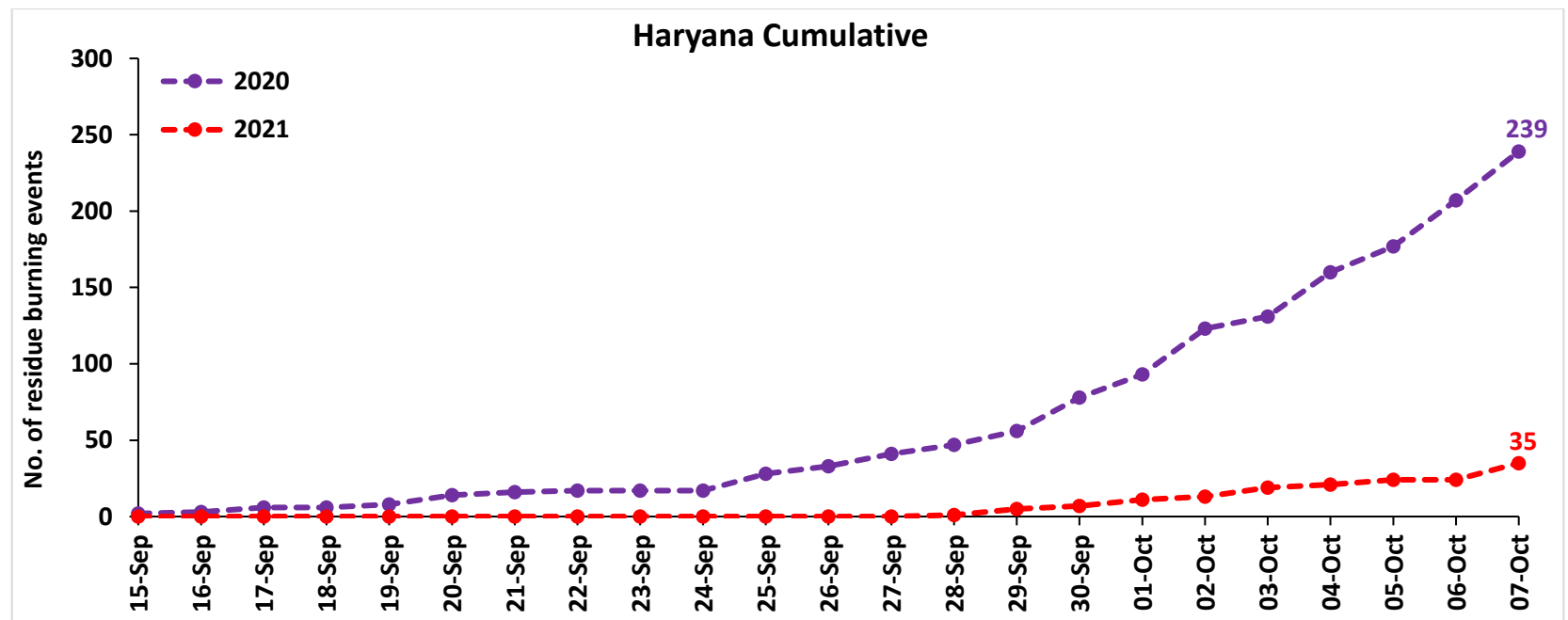
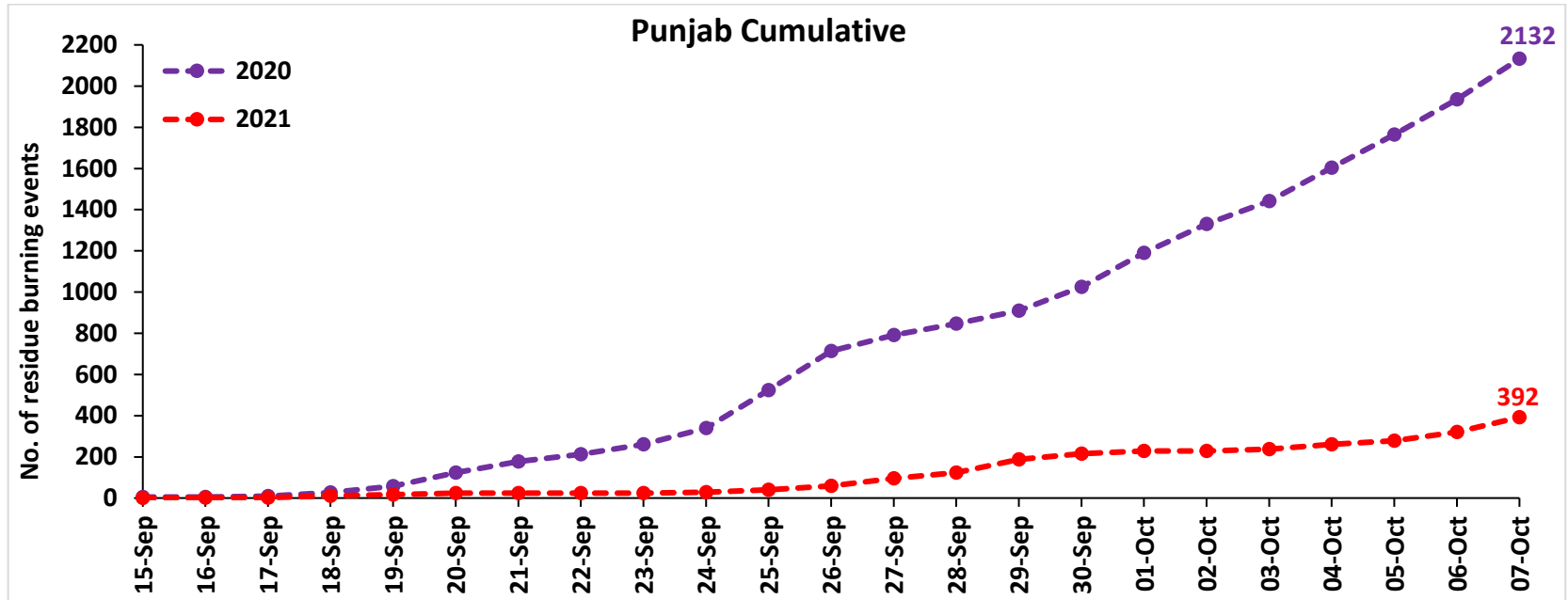
Rajasthan

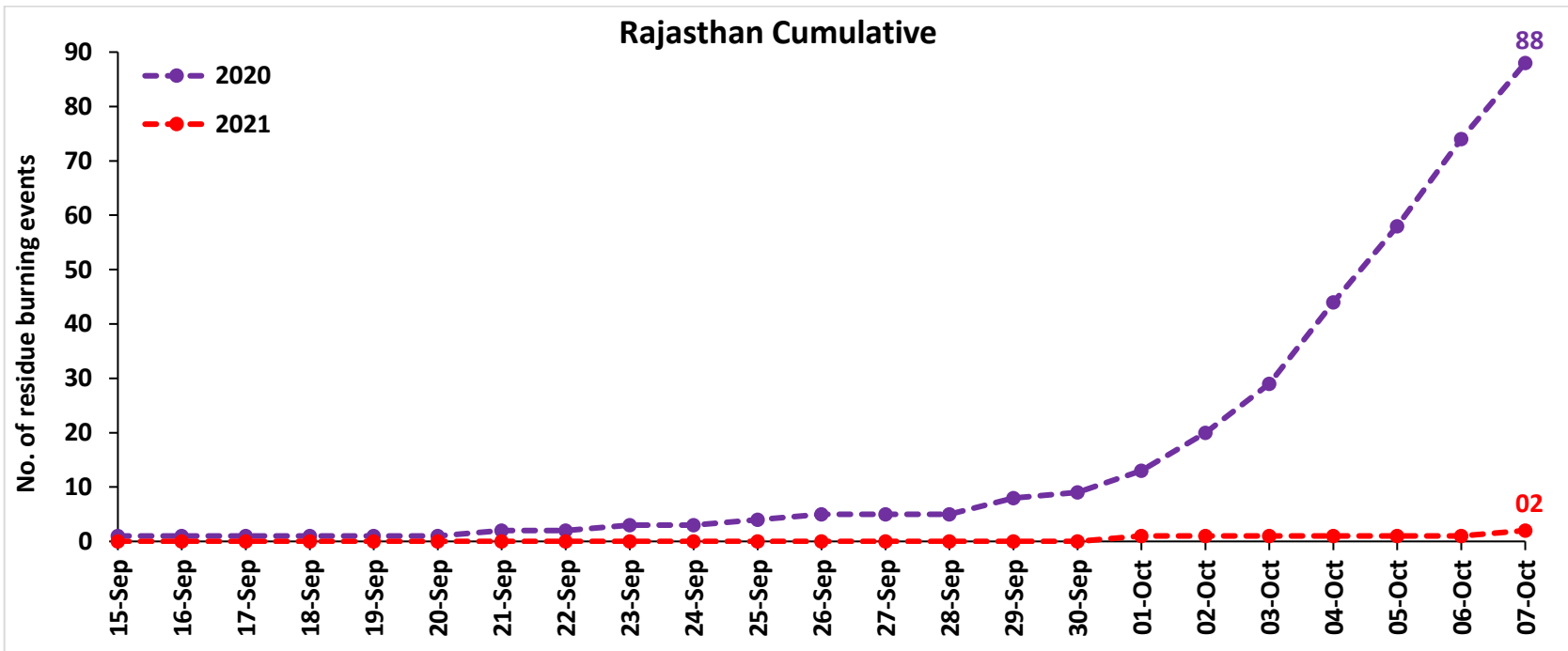
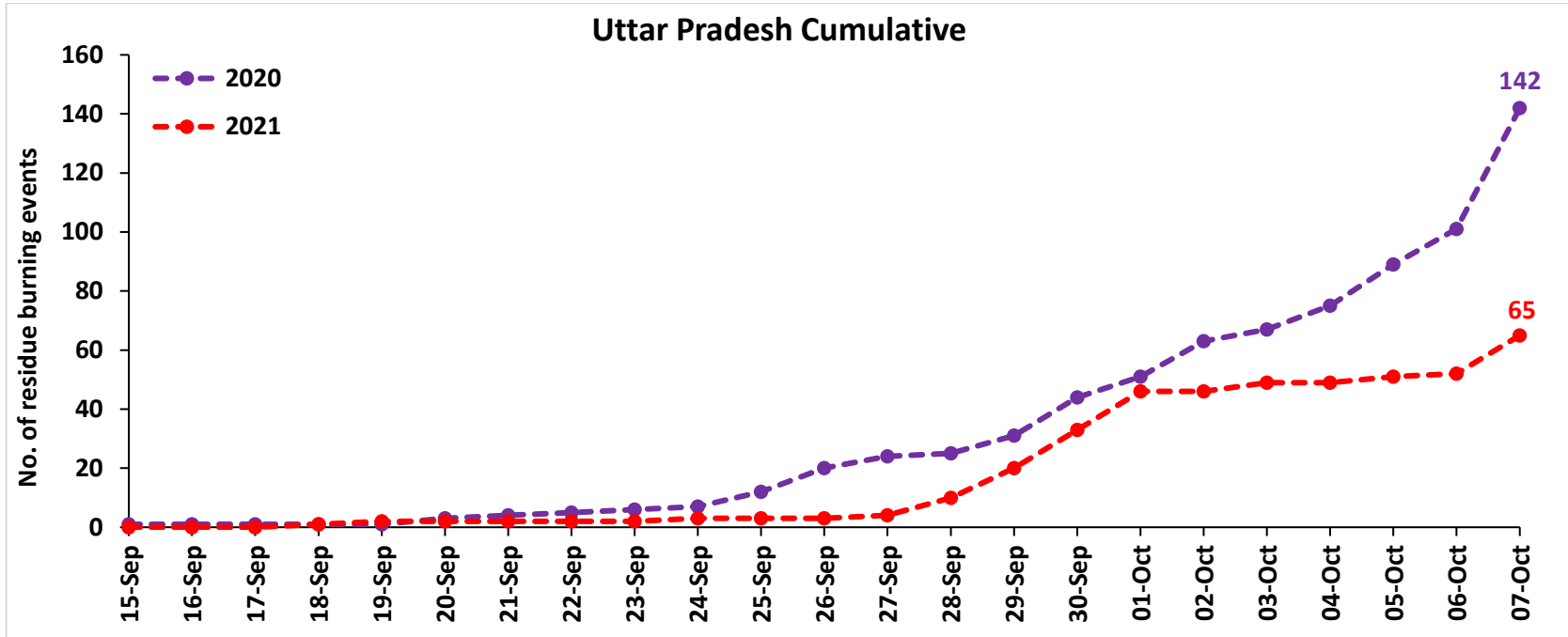


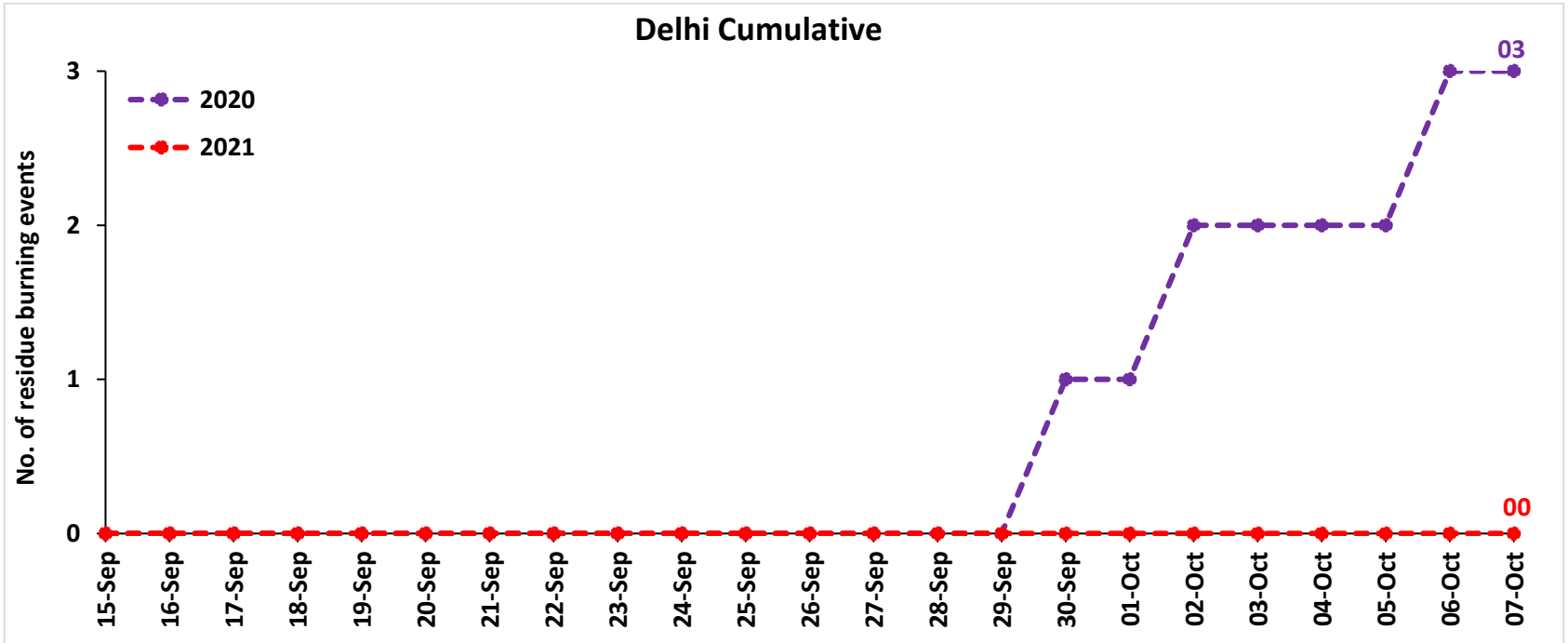
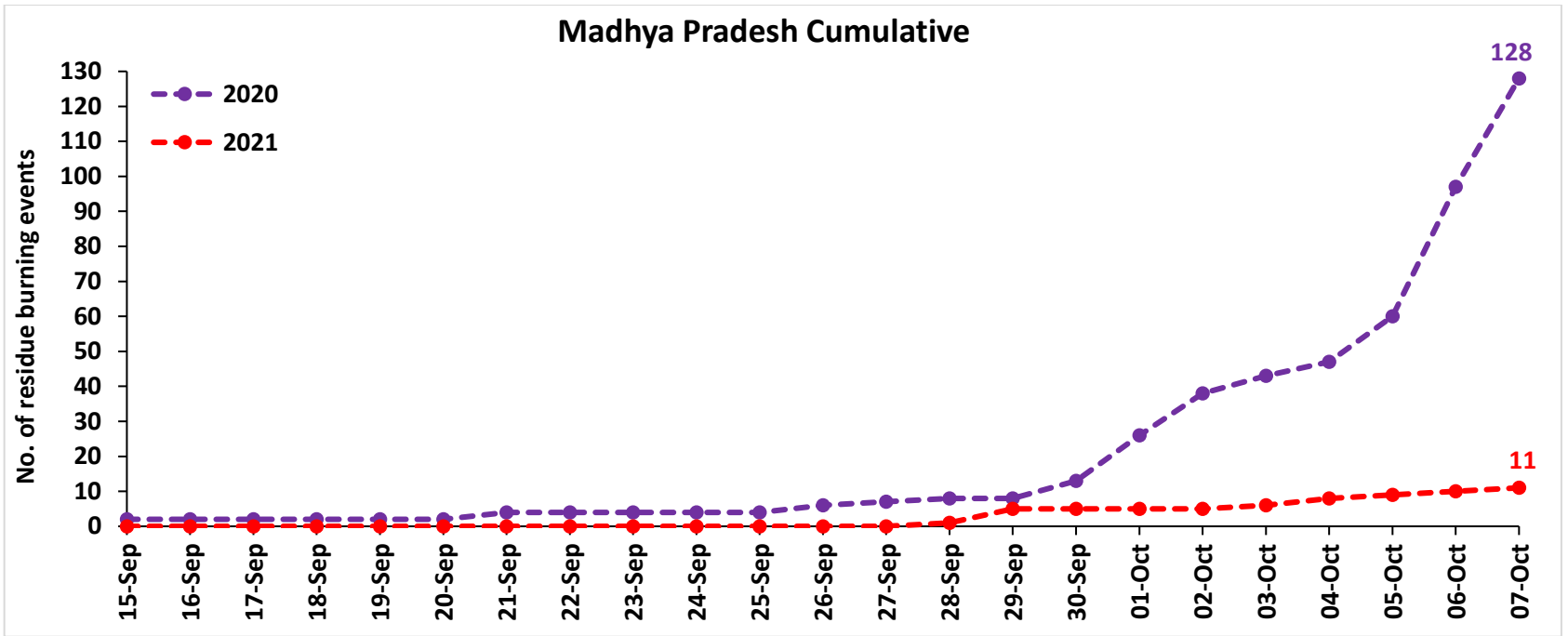
Madhya Pradesh



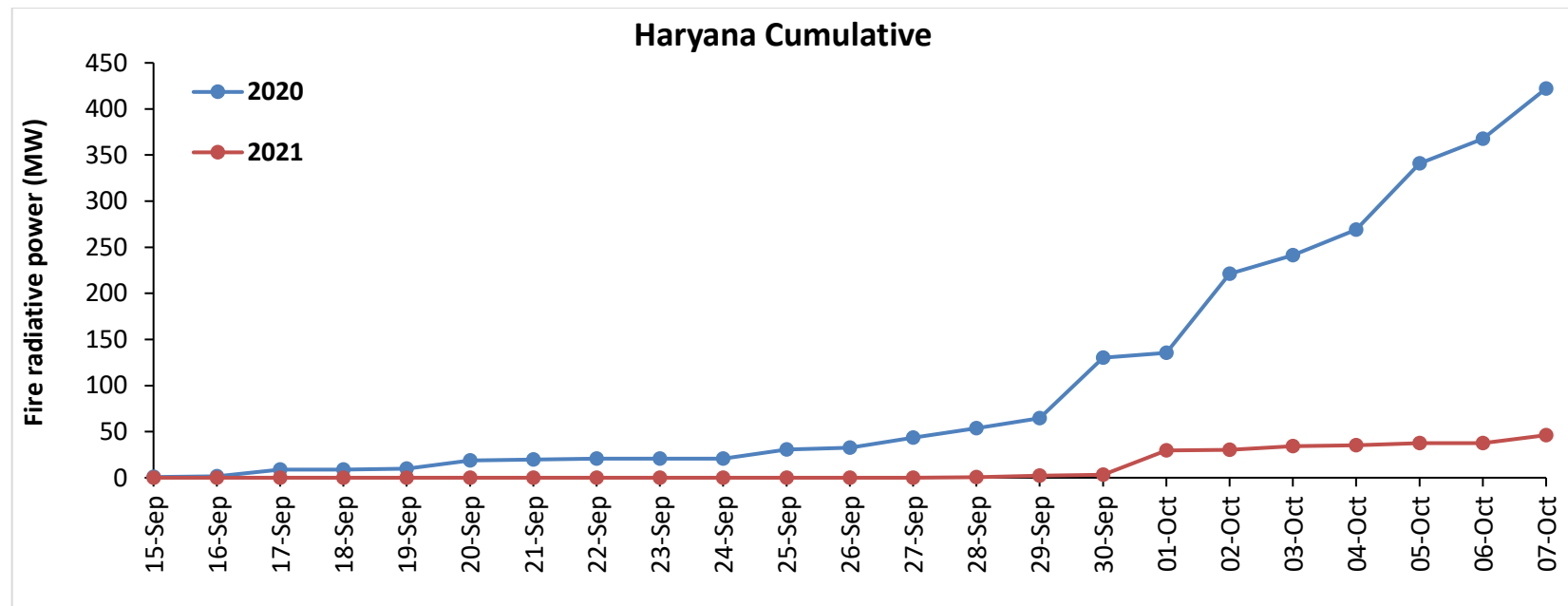
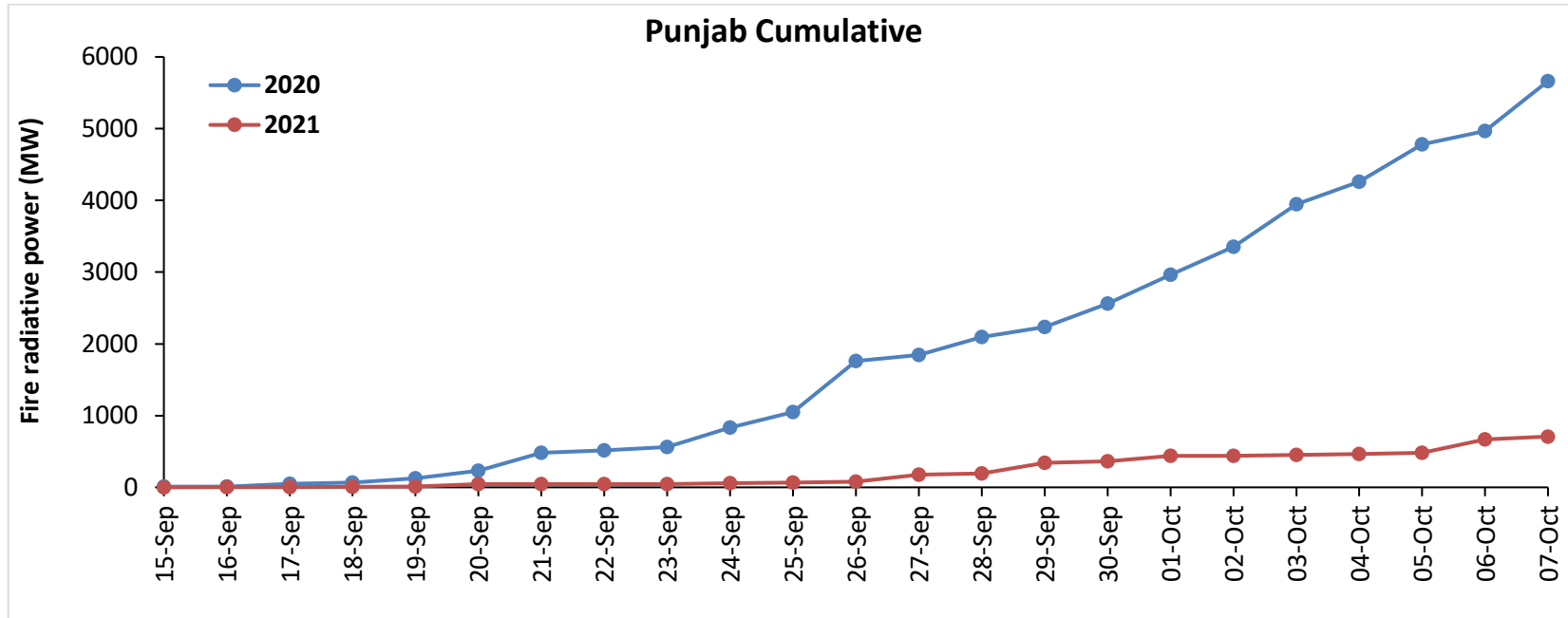
Comparison of residue burning events in current year (2021) with previous year (2020) for the study States

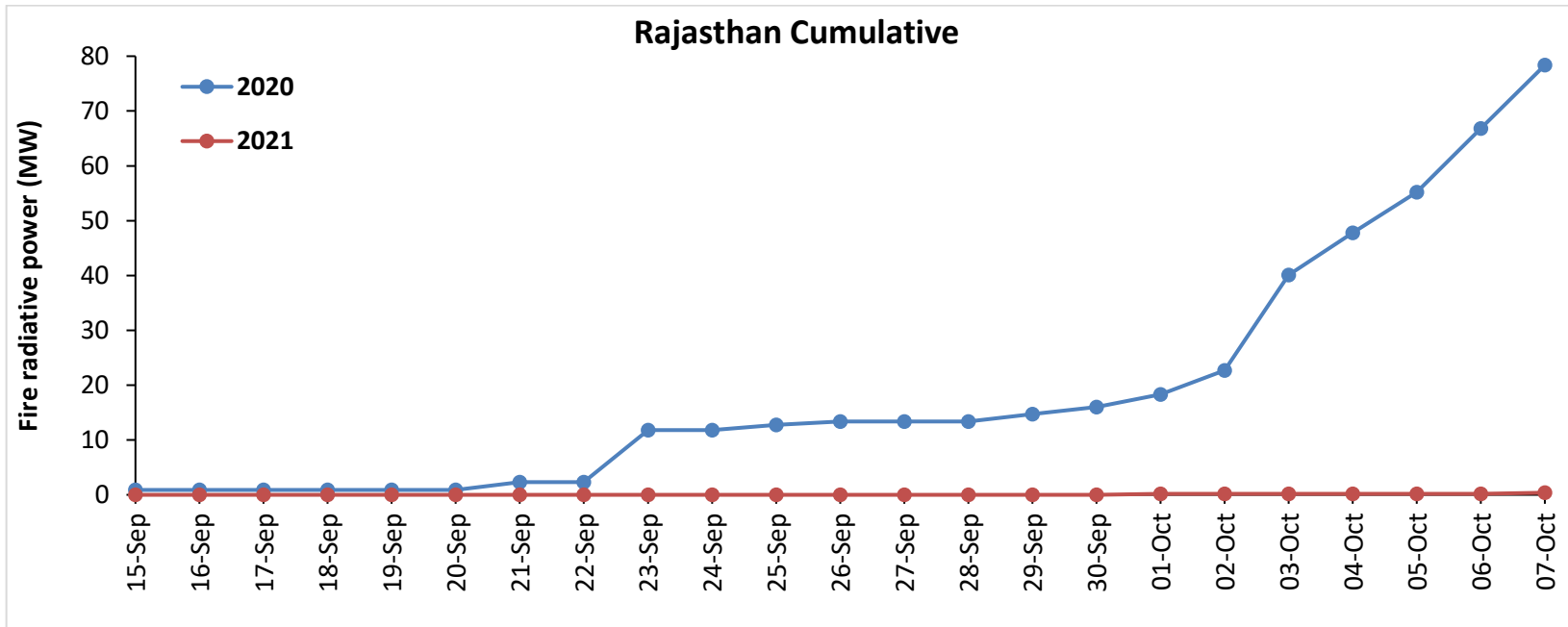
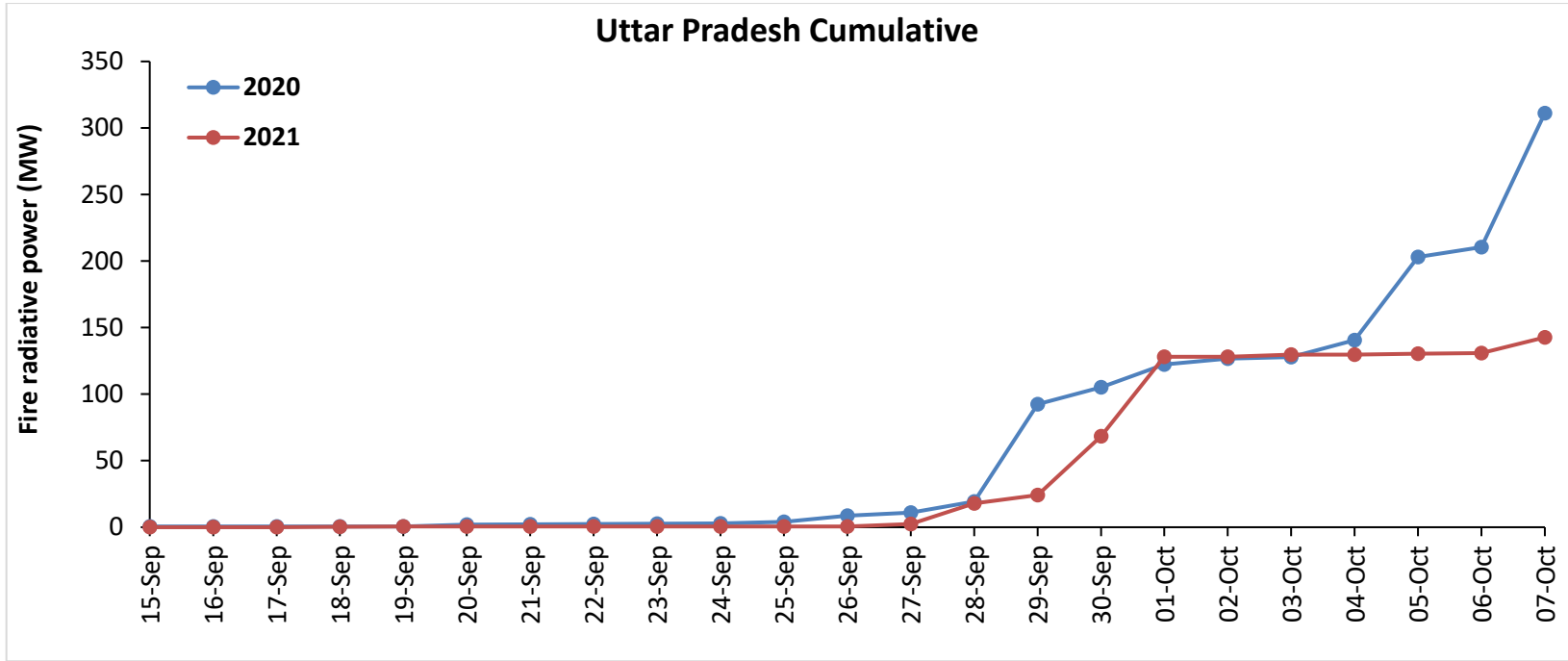


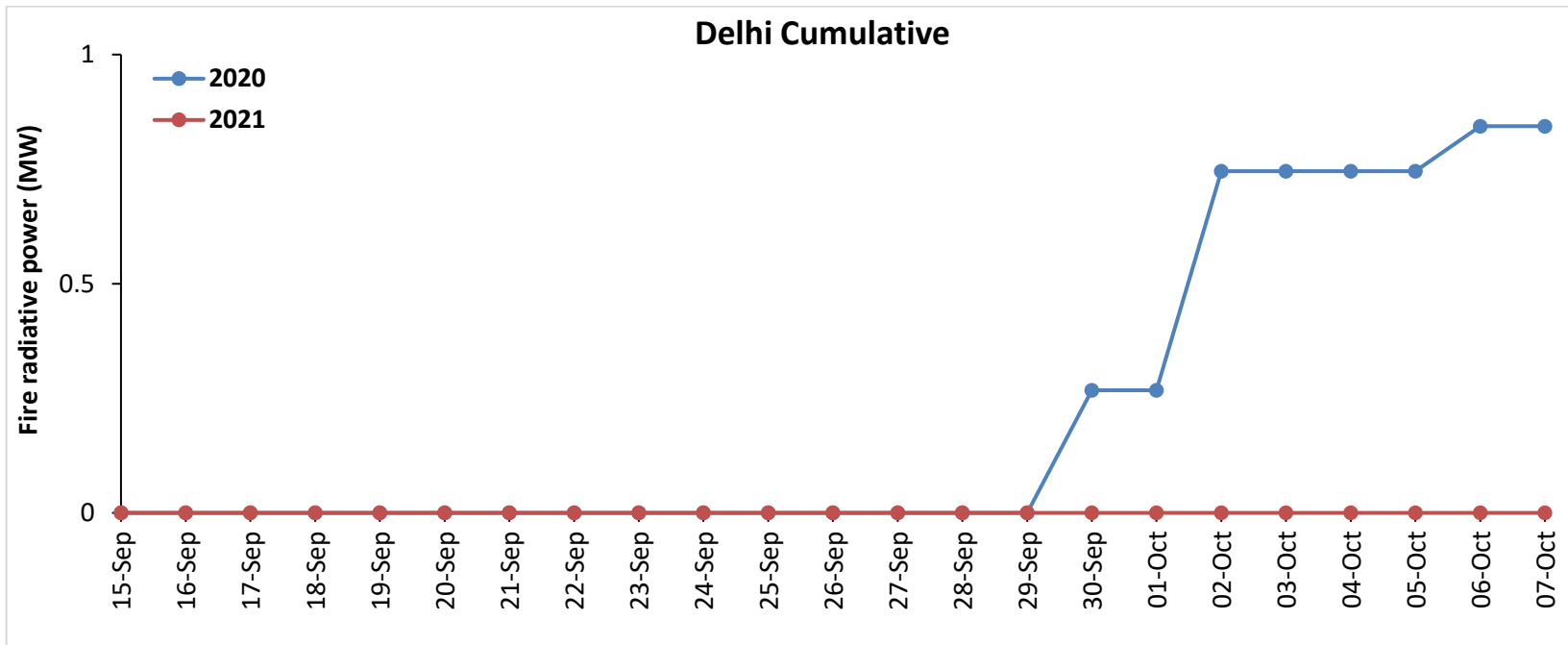
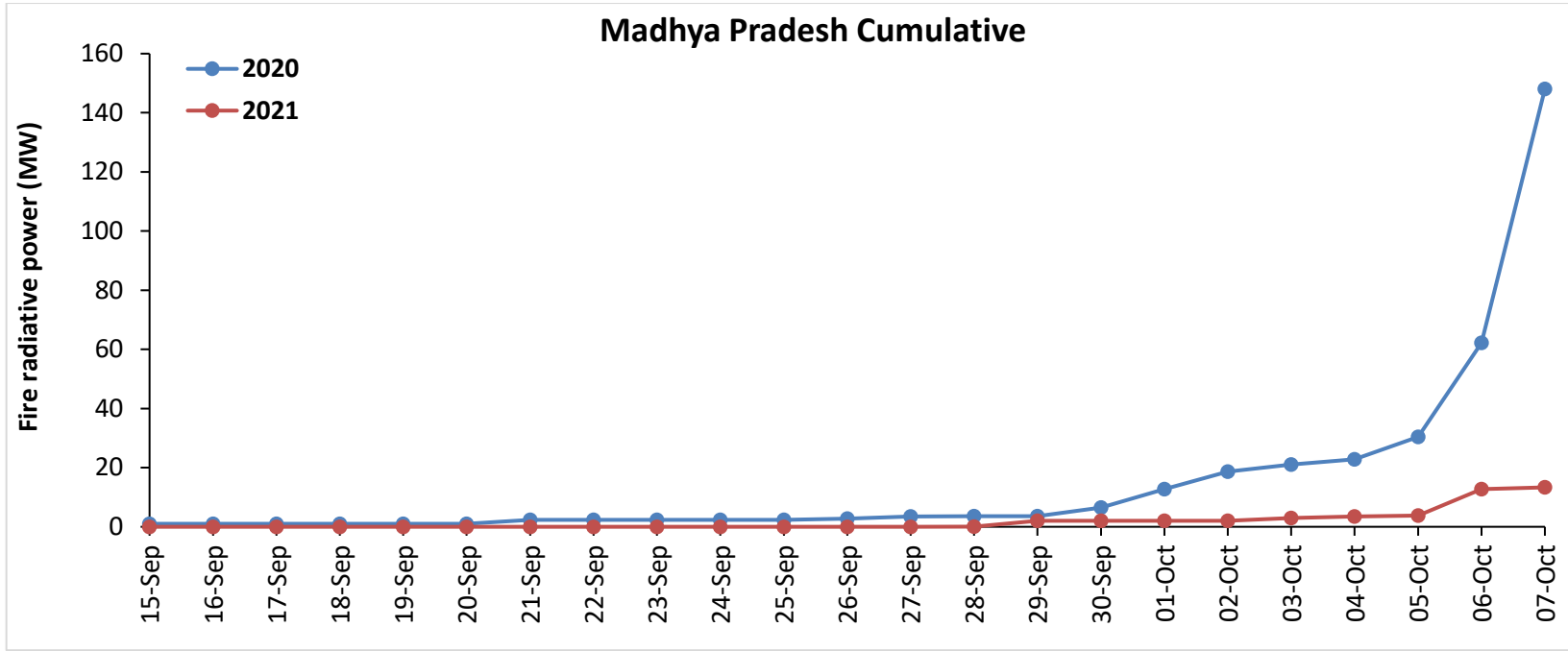




Comparison of residue burning fire power in current year (2021) with previous year (2020) for the study States

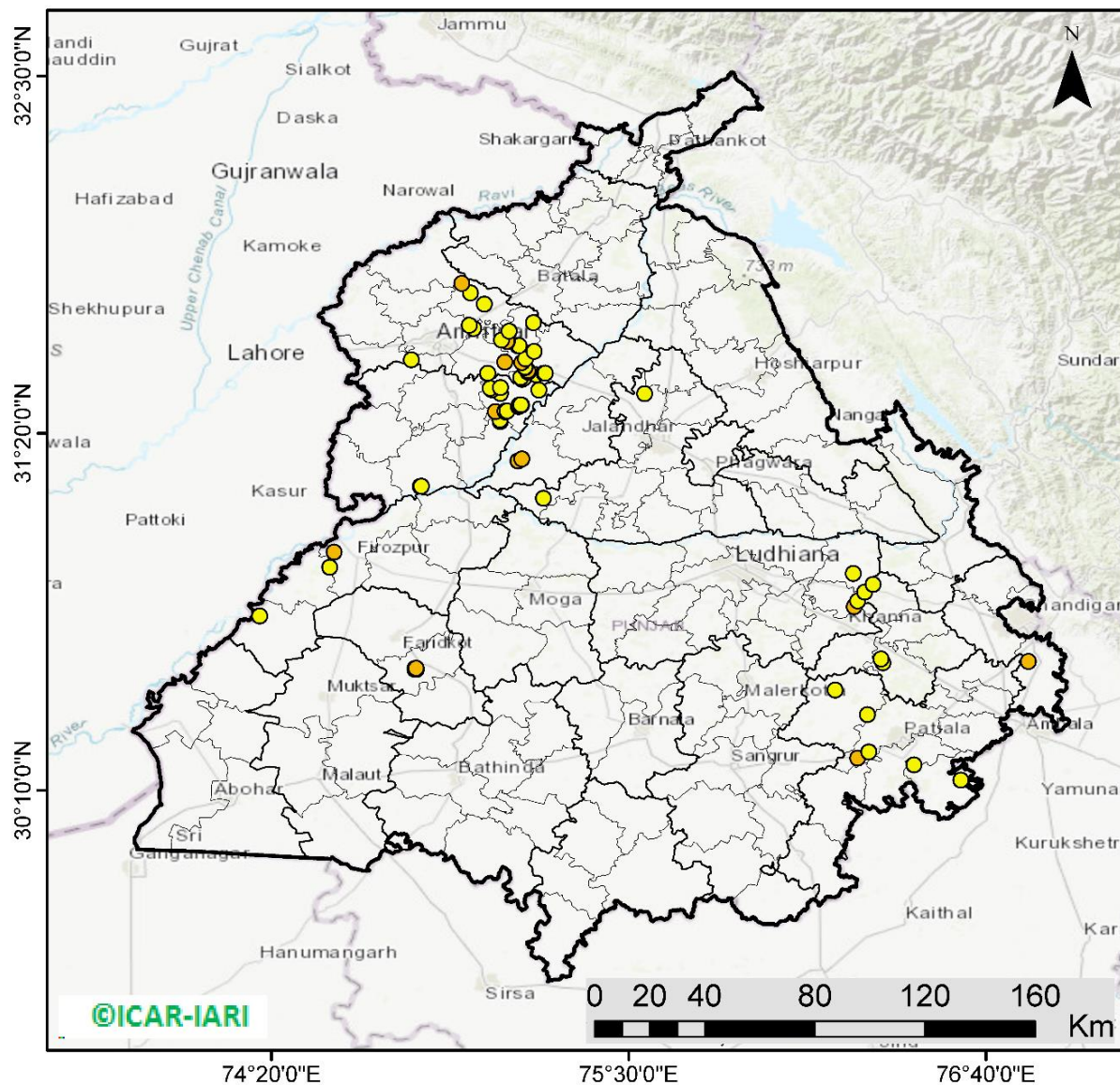






Punjab

RICE RESIDUE BURNING IN PUNJAB



72 burning events detected in Punjab on **07th October 2021**

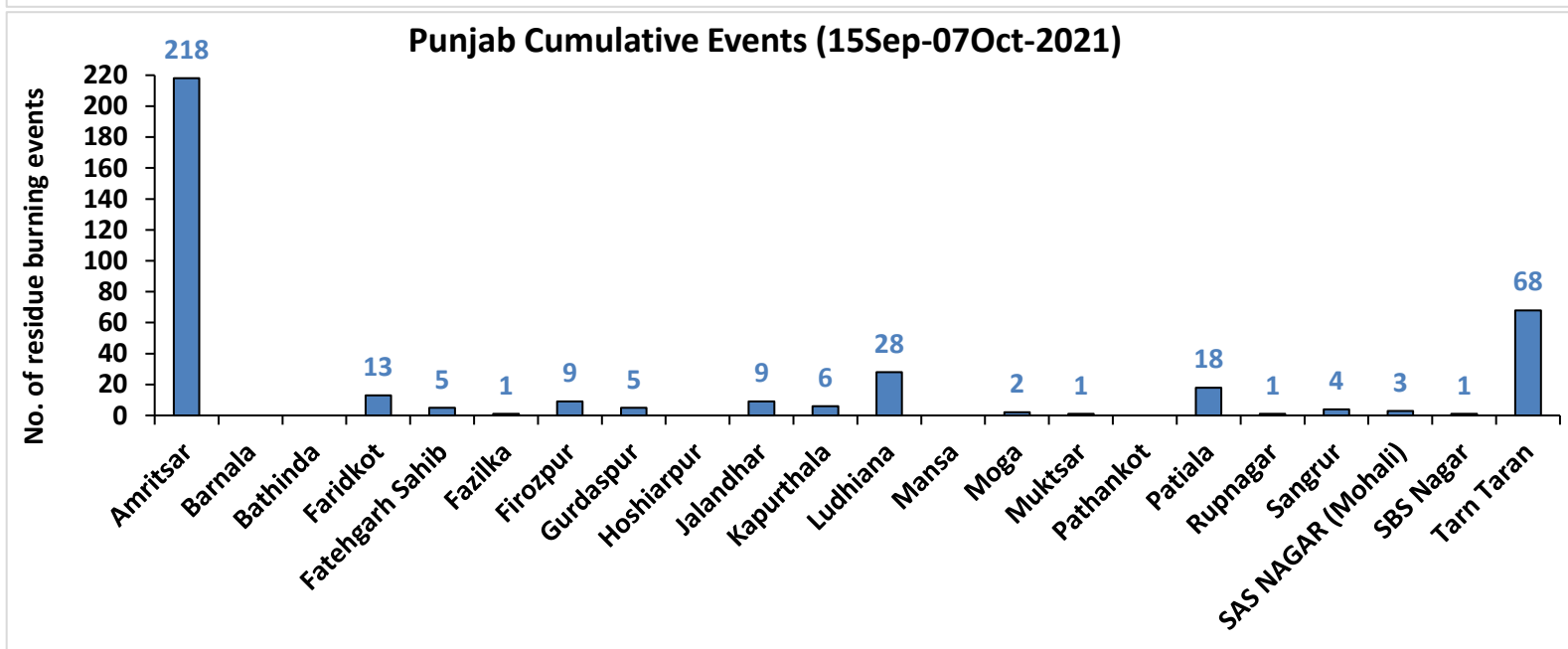
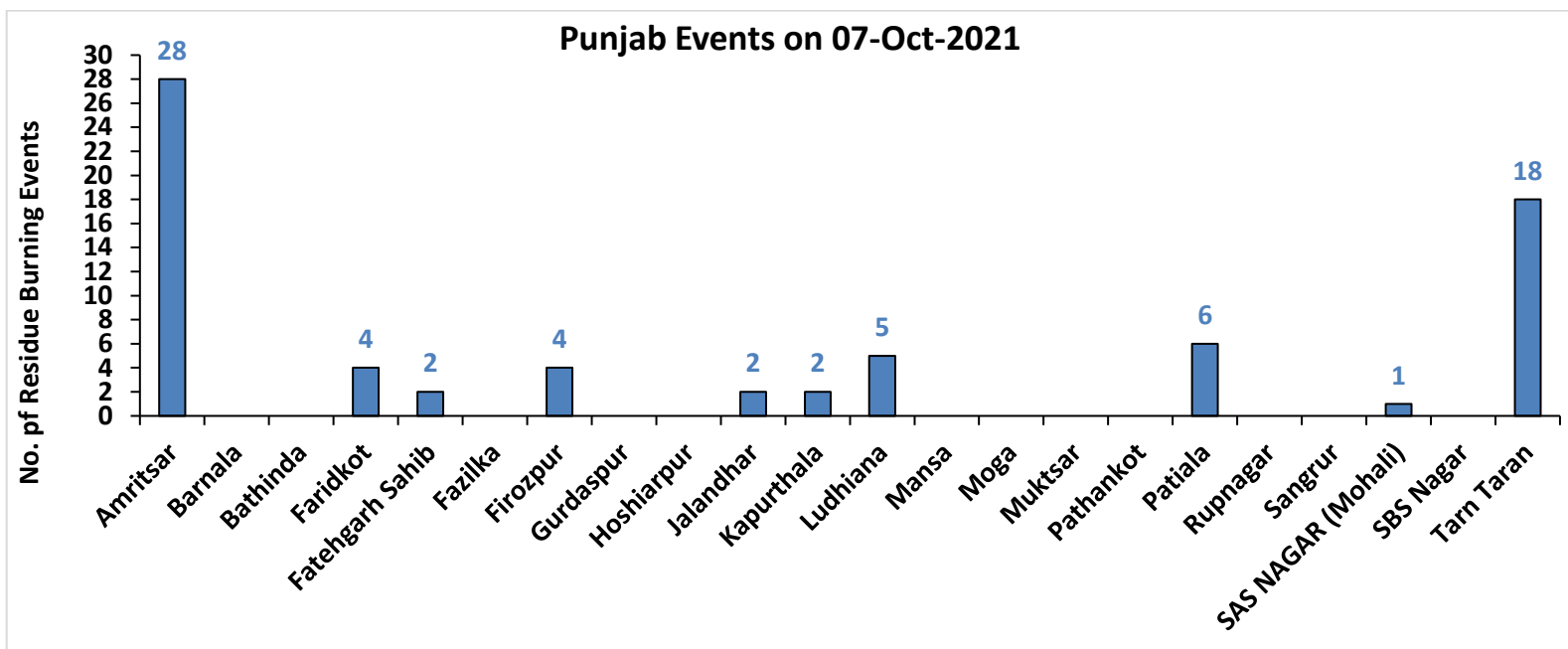
Fire Intensity (W/m²)

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



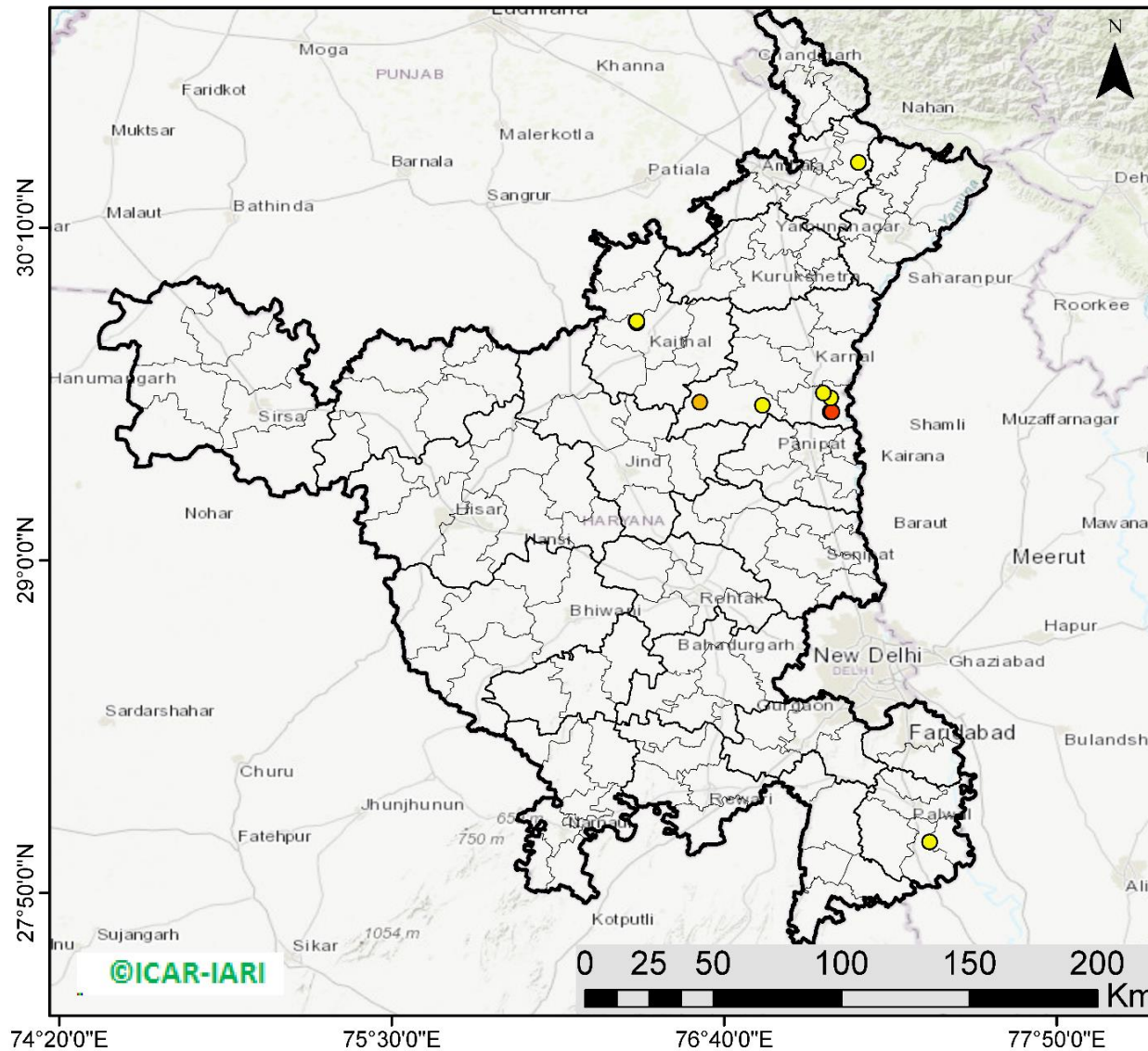
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (15Sep - 07Oct-2021)



Haryana

RICE RESIDUE BURNING IN HARYANA



11 burning events
detected in Haryana on
07th October 2021

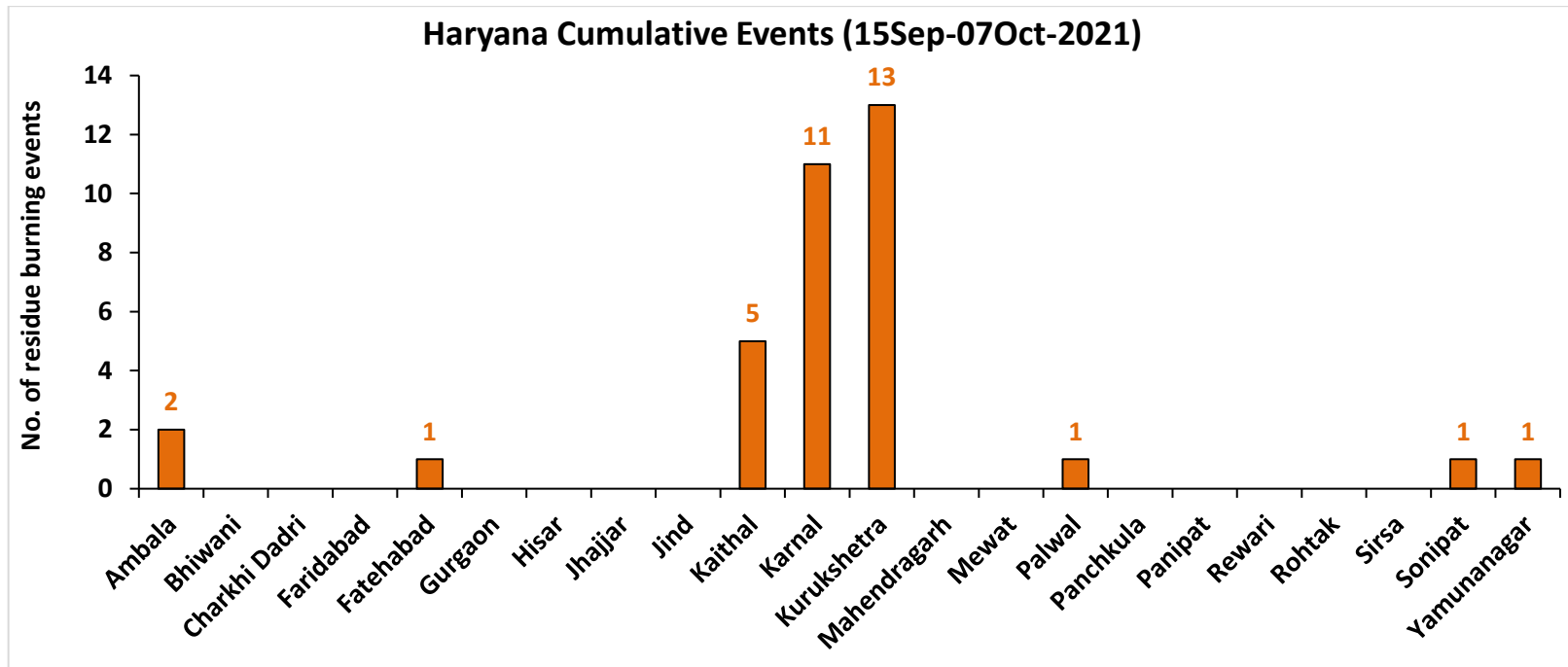
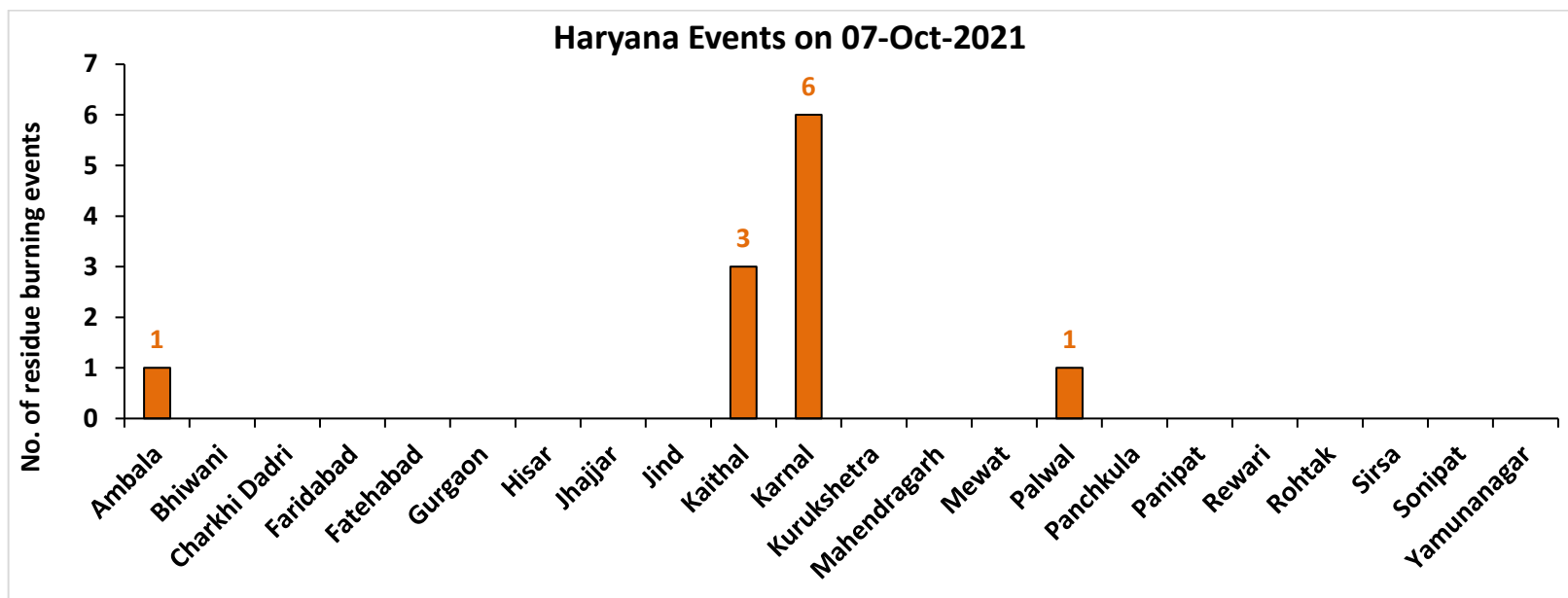
Fire Intensity (W/m²)

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



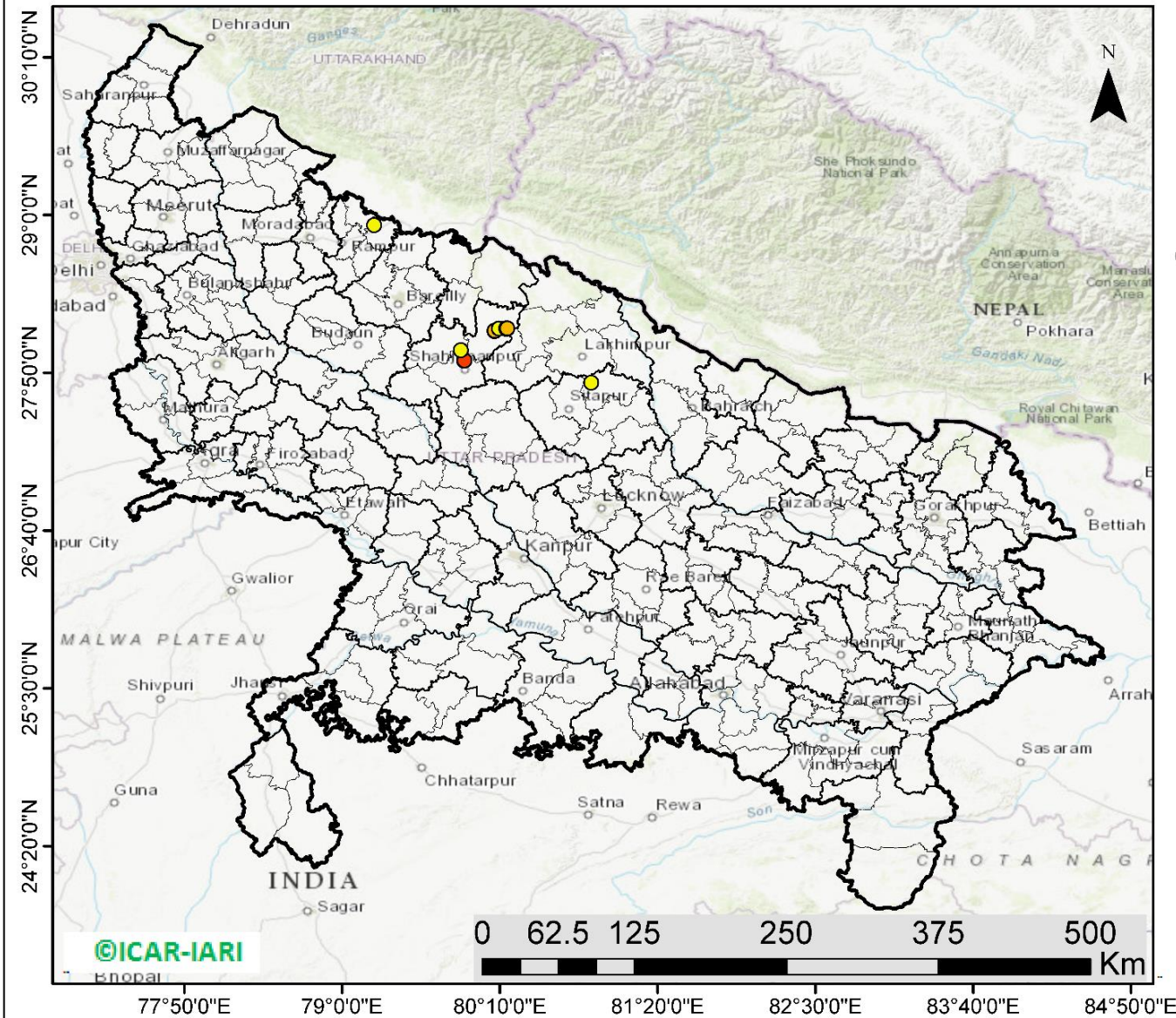
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Haryana (15Sep - 07Oct-2021)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



13 burning events detected in Uttar Pradesh on 07th October 2021

Fire Intensity (W/m²)

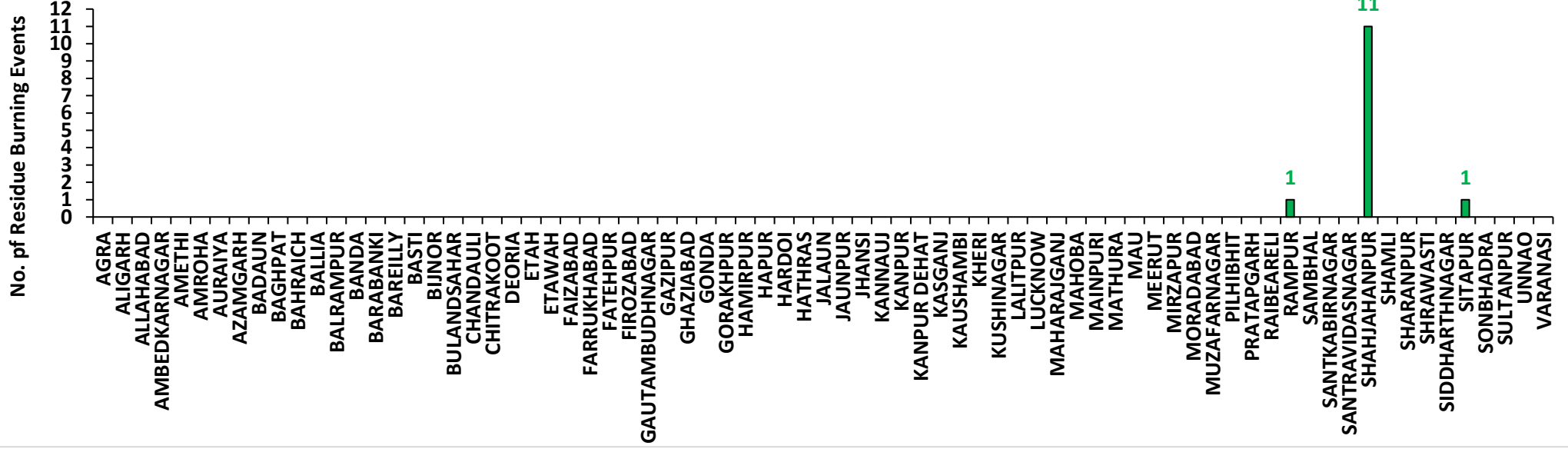
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20



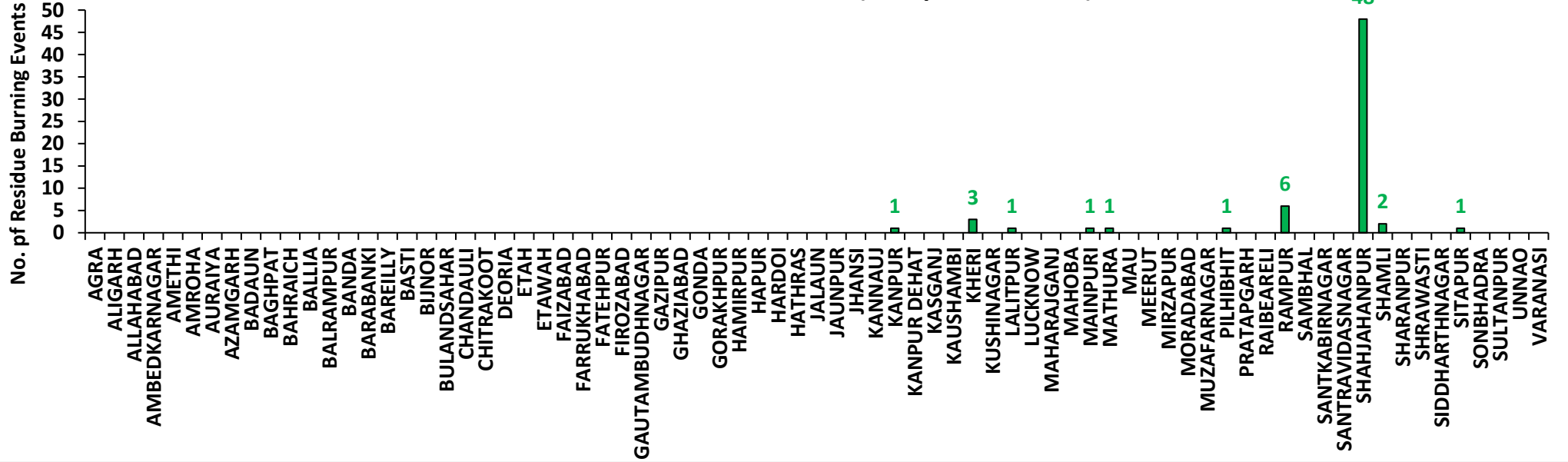
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15 Sep - 07 Oct-2021)

Uttar Pradesh Events on 07-Oct-2021

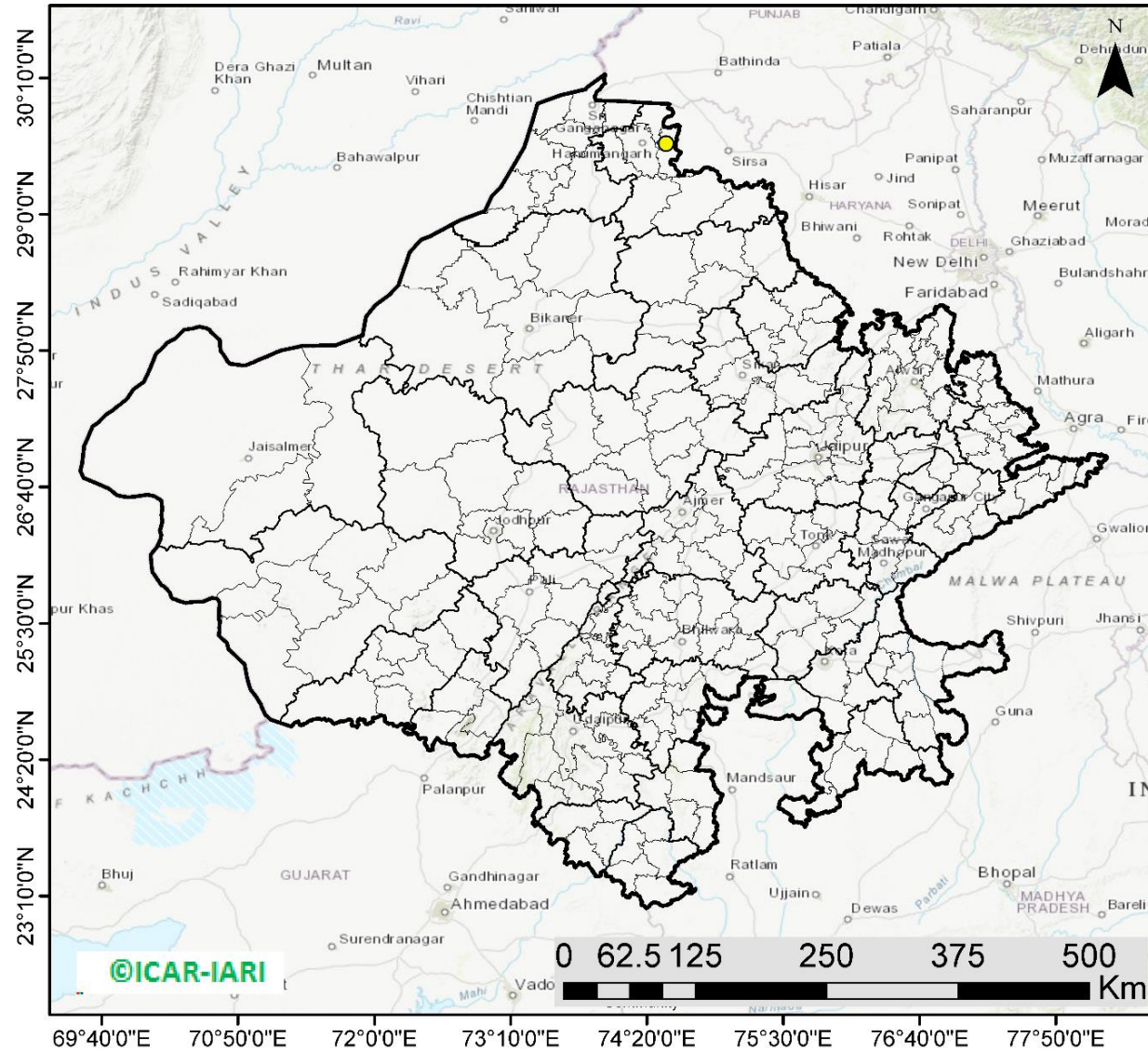


Uttar Pradesh Cumulative Events (15Sep-07Oct-2021)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



01 burning events
detected in Rajasthan on
07th October 2021

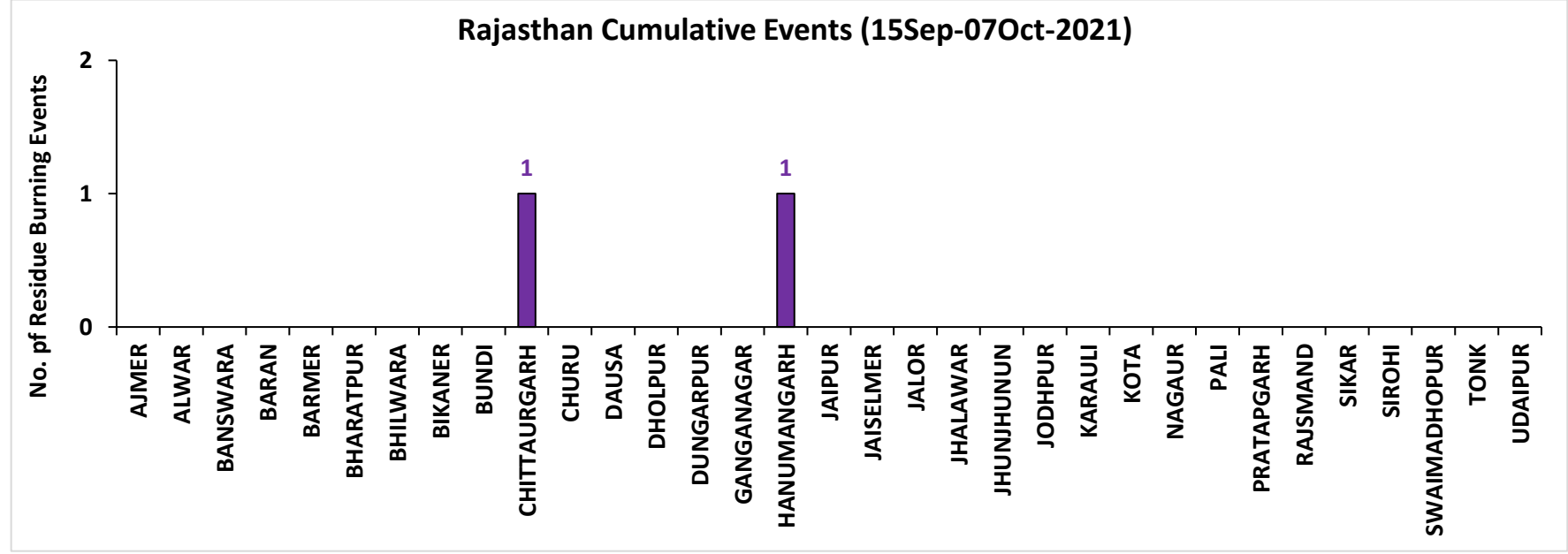
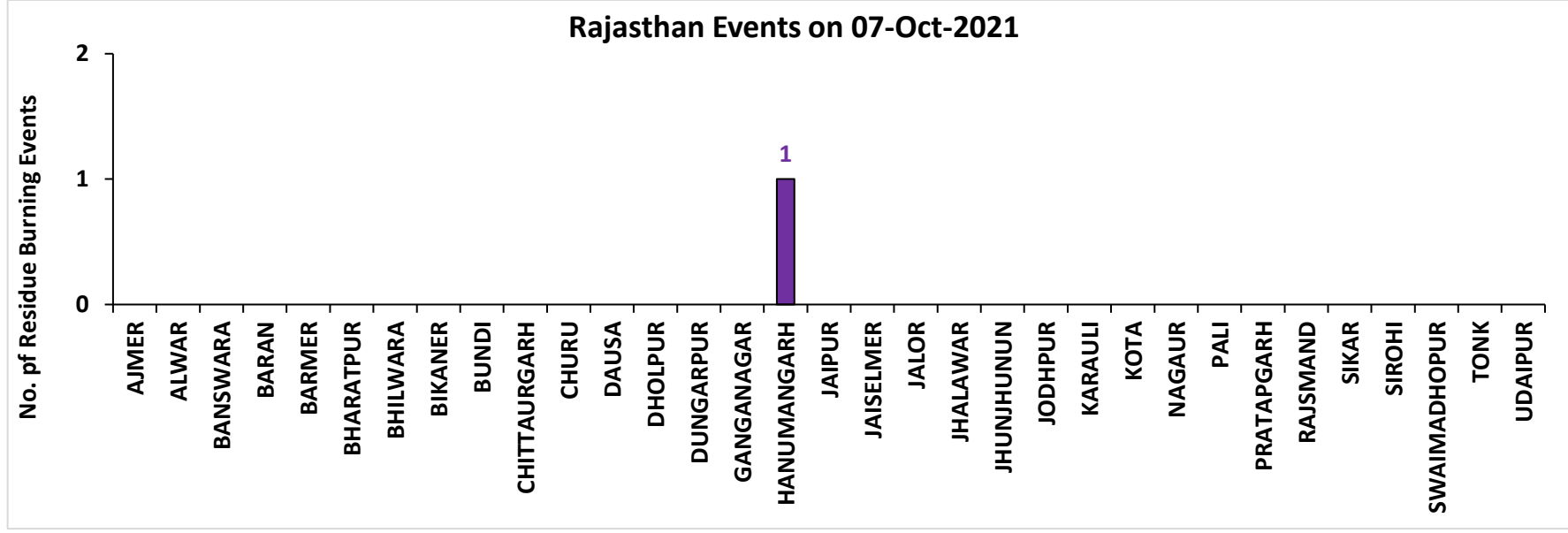
Fire Intensity (W/m²)

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



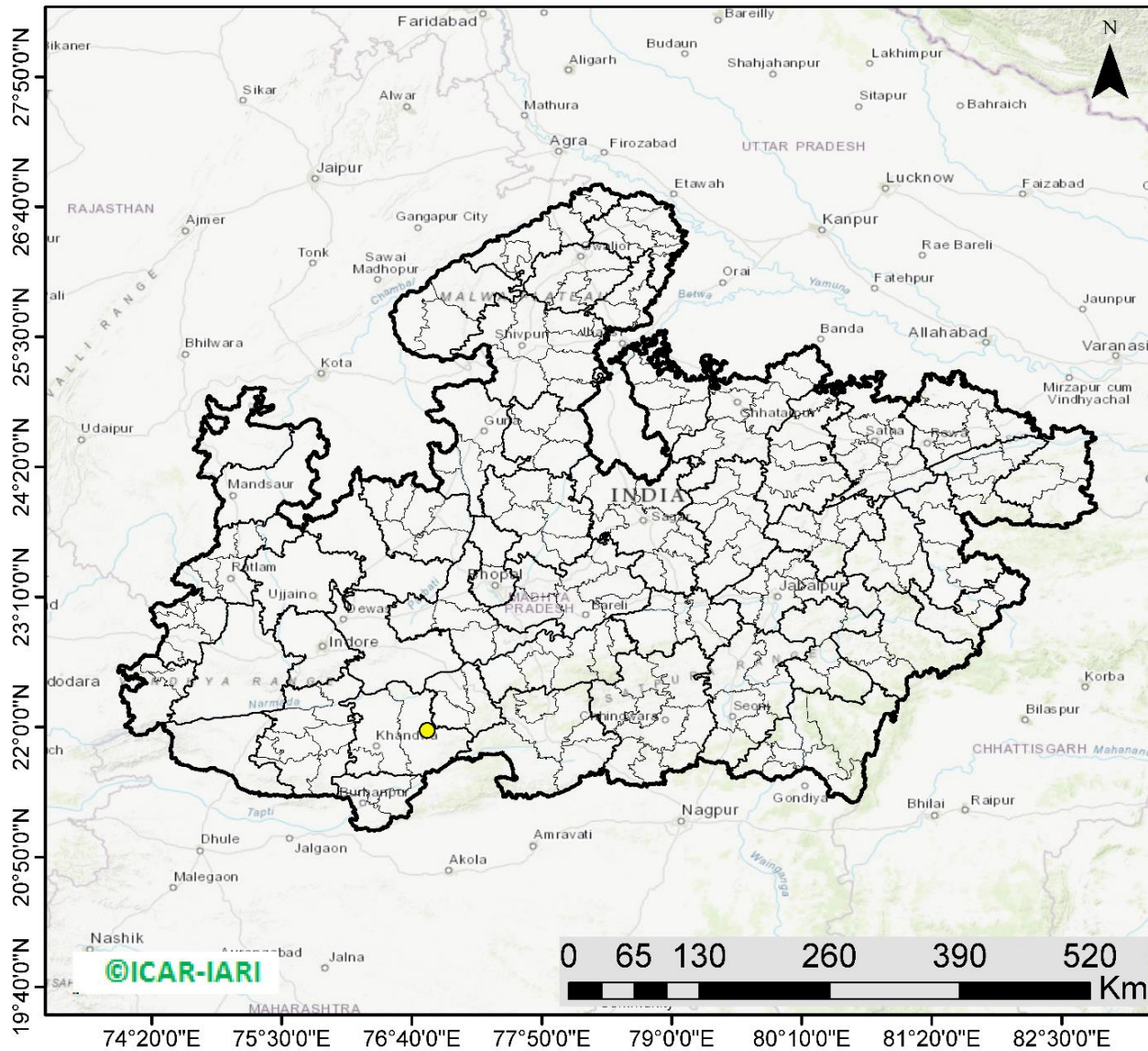
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15 Sep - 07 Oct-2021)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



01 burning events detected in MP on **07th October 2021**

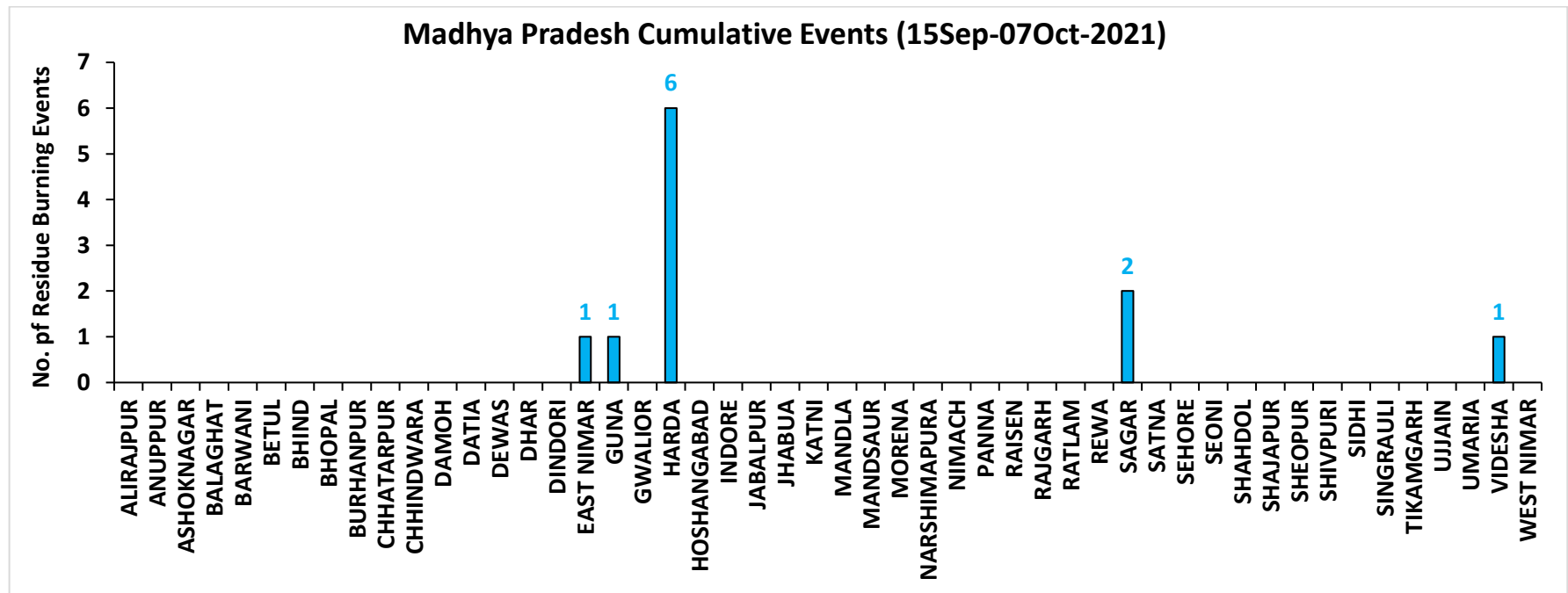
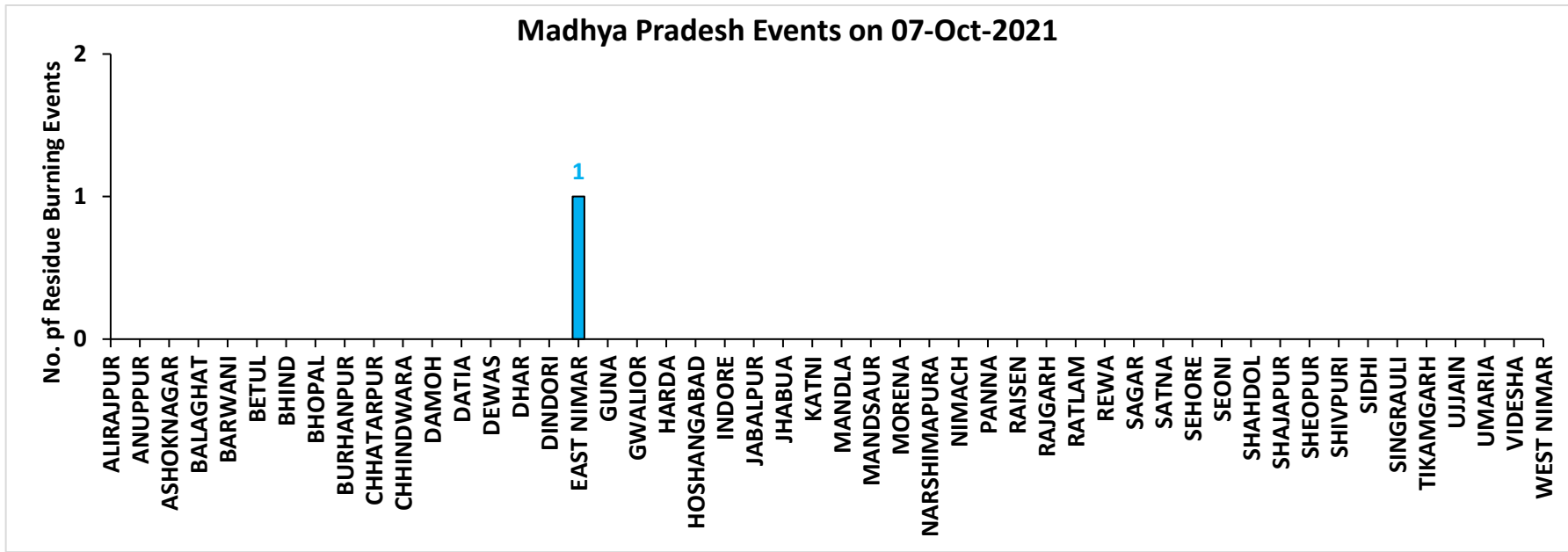
Fire Intensity (W/m²)

- 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 - 07 Oct-2021)



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

(Period: 15 September - 07 October)

(a) Punjab

District	15 Sep – 07 Oct	
	2020	2021
AMRITSAR	1211	218
BARNALA	5	0
BATHINDA	0	0
FARIDKOT	12	13
FATEHGARH SAHIB	26	5
FAZILKA	1	1
FIROZPUR	50	9
GURDASPUR	96	5
HOSHIARPUR	4	0
JALANDHAR	21	9
KAPURTHALA	32	6
LUDHIANA	56	28
MANSA	4	0
MOGA	14	2
MUKTSAR	1	1
PATHANKOT	0	0
PATIALA	99	18
RUPNAGAR	5	1
SANGRUR	44	4
SAS NAGAR (MOHALI)	10	3
SBS NAGAR	4	1
TARN TARAN	437	68
Total	2132	392

(b) Haryana

District	15 Sep – 07 Oct	
	2020	2021
AMBALA	32	2
BHIWANI	0	0
CHARKHI DADRI	0	0
FARIDABAD	0	0
FATEHABAD	18	1
GURGAON	0	0
HISAR	3	0
JHAJJAR	1	0
JIND	3	0
KAITHAL	34	5
KARNAL	62	11
KURUKSHETRA	53	13
MAHENDRAGARH	0	0
MEWAT	0	0
PALWAL	2	1
PANCHKULA	0	0
PANIPAT	6	0
REWARI	0	0
ROHTAK	0	0
SIRSA	2	0
SONIPAT	6	1
YAMUNANAGAR	17	1
Total	239	35

(c) Uttar Pradesh

District	15 Sep – 07 Oct							
	2020	2021	GAUTAMBUDHNAGAR	1	0	MUZAFARNAGAR	2	0
AGRA	0	0	GAZIPUR	0	0	PILHIBHIT	3	1
ALIGARH	13	0	GHAZIABAD	1	0	PRATAPGARH	0	0
ALLAHABAD	0	0	GONDA	0	0	RAIBEARELI	1	0
AMBEDKARNAGAR	0	0	GORAKHPUR	0	0	RAMPUR	5	6
AMETHI	0	0	HAMIRPUR	0	0	SAMBHAL	6	0
AMROHA	1	0	HAPUR	2	0	SANTKABIRNAGAR	0	0
AURAIYA	11	0	HARDOI	0	0	SANTRAVIDASNAGAR	0	0
AZAMGARH	0	0	HATHRAS	0	0	SHAHJAHANPUR	8	48
BADAUN	0	0	JALAUN	0	0	SHAMLI	15	2
BAGHPAT	1	0	JAUNPUR	0	0	SHARANPUR	10	0
BAHRAICH	1	0	JHANSI	4	0	SHRAWASTI	0	0
BALLIA	0	0	KANNAUJ	2	0	SIDDHARTHANAGAR	0	0
BALRAMPUR	0	0	KANPUR	0	1	SITAPUR	3	1
BANDA	0	0	KANPUR DEHAT	1	0	SONBHADRA	0	0
BARABANKI	4	0	KASGANJ	1	0	SULTANPUR	0	0
BAREILLY	5	0	KAUSHAMBI	5	0	UNNAO	2	0
BASTI	0	0	KHERI	9	3	VARANASI	0	0
BIJNOR	3	0	KUSHINAGAR	0	0	Total	142	65
BULANDSAHAR	1	0	LALITPUR	0	1			
CHANDAULI	0	0	LUCKNOW	1	0			
CHITRAKOOT	0	0	MAHARAJGANJ	0	0			
DEORIA	0	0	MAHOPA	0	0			
ETAH	3	0	MAINPURI	0	1			
ETAWAH	0	0	MATHURA	3	1			
FAIZABAD	0	0	MAU	0	0			
FARRUKHABAD	0	0	MEERUT	8	0			
FATEHPUR	4	0	MIRZAPUR	0	0			
FIROZABAD	1	0	MORADABAD	1	0			

(d) Delhi

District	15 Sep – 07 Oct	
	2020	2021
CENTRAL	0	0
EAST	0	0
NEW DELHI	0	0
NORTH	2	0
NORTH EAST	0	0
NORTH WEST DELHI	0	0
SHAHADRA	0	0
SOUTH	1	0
SOUTH EAST	0	0
SOUTH WEST DELHI	0	0
WEST DELHI	0	0
Total	3	0

(e) Rajasthan

District	15 Sep – 07 Oct	
	2020	2021
AJMER	0	0
ALWAR	1	0
BANSWARA	0	0
BARAN	48	0
BARMER	2	0
BHARATPUR	0	0
BHILWARA	2	0
BIKANER	0	0
BUNDI	1	0
CHITTAURGARH	0	1
CHURU	0	0
DAUSA	0	0
DHOLPUR	0	0
DUNGARPUR	0	0
GANGANAGAR	2	0
HANUMANGARH	12	1
JAIPUR	0	0
JAISELMER	2	0
JALOR	0	0
JHALAWAR	0	0
JHUNJHUNUN	1	0
JODHPUR	1	0
KARAULI	1	0
KOTA	13	0
NAGAUR	0	0
PALI	1	0
PRATAPGARH	0	0
RAJSMAND	0	0
SIKAR	0	0
SIROHI	0	0
SWAIMADHOPUR	0	0
TONK	1	0
UDAIPUR	0	0
Total	88	2

(f) Madhya Pradesh

District	15 Sep – 07 Oct				
	2020	2021			
			PANNA	0	0
ALIRAJPUR	0	0	RAISEN	2	0
ANUPPUR	0	0	RAJGARH	1	0
ASHOKNAGAR	6	0	RATLAM	0	0
BALAGHAT	0	0	REWA	1	0
BARWANI	0	0	SAGAR	7	2
BETUL	0	0	SATNA	3	0
BHIND	0	0	SEHORE	4	0
BHOPAL	2	0	SEONI	1	0
BURHANPUR	0	0	SHAHDOL	0	0
CHHATARPUR	2	0	SHAJAPUR	4	0
CHHINDWARA	0	0	SHEOPUR	2	0
DAMOH	6	0	SHIVPURI	0	0
DATIA	2	0	SIDHI	0	0
DEWAS	2	0	SINGRAULI	0	0
DHAR	13	0	TIKAMGARH	0	0
DINDORI	0	0	UJJAIN	5	0
EAST NIMAR	0	1	UMARIA	0	0
GUNA	7	1	VIDESHA	23	1
GWALIOR	13	0	WEST NIMAR	1	0
HARDA	8	6	Total	128	11
HOSHANGABAD	3	0			
INDORE	1	0			
JABALPUR	4	0			
JHABUA	0	0			
KATNI	0	0			
MANDLA	0	0			
MANDSAUR	0	0			
MORENA	5	0			
NARSHIMAPURA	0	0			
NIMACH	0	0			

State-wise and date-wise number of paddy residue burning events detected in 2020 and 2021
(Period: 15 September - 07 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
Total	2132	392	239	35	142	65	3	0	88	2	128	11

Details of residue burning events in Punjab on 07-Oct-2021

S. No.	District	Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	AMRITSAR	ATTARI	S-NPP	31.57270	74.79040	10/7/2021	14:12:50	D	2.10
2	AMRITSAR	JANDIALA GURU	S-NPP	31.52950	75.03980	10/7/2021	14:12:50	D	2.00
3	AMRITSAR	JANDIALA GURU	S-NPP	31.56590	75.09570	10/7/2021	14:12:50	D	8.10
4	AMRITSAR	JANDIALA GURU	S-NPP	31.67560	74.99380	10/7/2021	14:12:50	D	3.00
5	AMRITSAR	MAJITHA	S-NPP	31.75510	75.02900	10/7/2021	14:12:50	D	1.70
6	AMRITSAR	MAJITHA	S-NPP	31.79100	74.98350	10/7/2021	14:12:50	D	4.50
7	AMRITSAR	MAJITHA	S-NPP	31.82230	74.95550	10/7/2021	14:12:50	D	8.40
8	AMRITSAR	RAYYA	S-NPP	31.50950	75.15210	10/7/2021	14:12:50	D	2.40
9	AMRITSAR	RAYYA	S-NPP	31.51280	75.15740	10/7/2021	12:33:16	D	3.90
10	AMRITSAR	RAYYA	S-NPP	31.51480	75.14740	10/7/2021	14:12:50	D	2.40
11	AMRITSAR	RAYYA	S-NPP	31.52390	75.19820	10/7/2021	14:12:50	D	1.80
12	AMRITSAR	RAYYA	S-NPP	31.52940	75.22350	10/7/2021	14:12:50	D	3.00
13	AMRITSAR	RAYYA	S-NPP	31.52960	75.22780	10/7/2021	14:12:50	D	3.00
14	AMRITSAR	RAYYA	S-NPP	31.53330	75.17160	10/7/2021	14:12:50	D	7.20
15	AMRITSAR	RAYYA	S-NPP	31.53730	75.17100	10/7/2021	14:12:50	D	6.00
16	AMRITSAR	RAYYA	S-NPP	31.54790	75.16150	10/7/2021	14:12:50	D	4.00
17	AMRITSAR	RAYYA	S-NPP	31.54940	75.16170	10/7/2021	14:12:50	D	4.50
18	AMRITSAR	RAYYA	S-NPP	31.56400	75.15150	10/7/2021	14:12:50	D	6.60
19	AMRITSAR	TARSIKKA	S-NPP	31.57600	75.16340	10/7/2021	14:12:50	D	3.00
20	AMRITSAR	TARSIKKA	S-NPP	31.60030	75.19150	10/7/2021	14:12:50	D	2.50
21	AMRITSAR	TARSIKKA	S-NPP	31.61910	75.13820	10/7/2021	14:12:50	D	4.60
22	AMRITSAR	TARSIKKA	S-NPP	31.61940	75.14250	10/7/2021	14:12:50	D	4.60
23	AMRITSAR	TARSIKKA	S-NPP	31.63270	75.10370	10/7/2021	14:12:50	D	5.40
24	AMRITSAR	TARSIKKA	S-NPP	31.63340	75.10270	10/7/2021	14:12:50	D	6.70
25	AMRITSAR	TARSIKKA	S-NPP	31.63770	75.08530	10/7/2021	14:12:50	D	2.10
26	AMRITSAR	TARSIKKA	S-NPP	31.66660	75.10940	10/7/2021	14:12:50	D	3.00
27	AMRITSAR	TARSIKKA	S-NPP	31.69420	75.18890	10/7/2021	14:12:50	D	2.50
28	AMRITSAR	VERKA	S-NPP	31.68580	74.98020	10/7/2021	14:12:50	D	3.20
29	FARIDKOT	KOT KAPURA	S-NPP	30.56200	74.80270	10/7/2021	14:12:50	D	5.70

30	FARIDKOT	KOT KAPURA	S-NPP	30.56220	74.80670	10/7/2021	14:12:50	D	5.70
31	FARIDKOT	KOT KAPURA	S-NPP	30.56510	74.80250	10/7/2021	14:12:50	D	5.90
32	FARIDKOT	KOT KAPURA	S-NPP	30.56540	74.80640	10/7/2021	14:12:50	D	5.90
33	FATEHGARH SAHIB	SIRHIND	S-NPP	30.58360	76.33020	10/7/2021	12:33:16	D	3.30
34	FATEHGARH SAHIB	SIRHIND	S-NPP	30.59610	76.32410	10/7/2021	14:12:50	D	2.80
35	FIROZPUR	FIROZPUR	S-NPP	30.94470	74.53840	10/7/2021	14:12:50	D	6.90
36	FIROZPUR	GURUHAR SAHAI	S-NPP	30.73620	74.29460	10/7/2021	14:12:50	D	3.00
37	FIROZPUR	GURUHAR SAHAI	S-NPP	30.73620	74.29520	10/7/2021	14:12:50	D	3.10
38	FIROZPUR	MAMDOT	S-NPP	30.89530	74.52370	10/7/2021	14:12:50	D	2.10
39	JALANDHAR	JALANDHAR WEST	S-NPP	31.46210	75.55260	10/7/2021	14:12:50	D	3.10
40	JALANDHAR	LOHIAN	S-NPP	31.12080	75.22180	10/7/2021	14:12:50	D	2.20
41	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.24300	75.13860	10/7/2021	12:33:16	D	7.20
42	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.24910	75.15130	10/7/2021	14:12:50	D	5.40
43	LUDHIANA	MACHHIWARA	S-NPP	30.81400	76.27110	10/7/2021	14:12:50	D	1.60
44	LUDHIANA	MACHHIWARA	S-NPP	30.83940	76.29870	10/7/2021	14:12:50	D	2.90
45	LUDHIANA	MACHHIWARA	S-NPP	30.87530	76.23400	10/7/2021	14:12:50	D	3.10
46	LUDHIANA	SAMRALA	S-NPP	30.76670	76.23660	10/7/2021	12:33:16	D	5.30
47	LUDHIANA	SAMRALA	S-NPP	30.78510	76.24810	10/7/2021	14:12:50	D	4.30
48	PATIALA	BHUNARHERI	S-NPP	30.20020	76.58510	10/7/2021	14:12:50	D	3.80
49	PATIALA	BHUNARHERI	S-NPP	30.25030	76.43240	10/7/2021	14:12:50	D	3.00
50	PATIALA	NABHA	S-NPP	30.41390	76.28010	10/7/2021	14:12:50	D	4.10
51	PATIALA	NABHA	S-NPP	30.49430	76.17420	10/7/2021	14:12:50	D	2.80
52	PATIALA	PATIALA	S-NPP	30.27220	76.24770	10/7/2021	14:12:50	D	5.80
53	PATIALA	PATIALA	S-NPP	30.29220	76.28460	10/7/2021	14:12:50	D	2.50
54	SAS NAGAR (MOHALI)	DERABASSI	S-NPP	30.58800	76.80560	10/7/2021	14:12:50	D	6.80
55	TARN TARAN	CHOHLA SAHIB	S-NPP	31.37130	75.08050	10/7/2021	14:12:50	D	2.30
56	TARN TARAN	CHOHLA SAHIB	S-NPP	31.37690	75.08000	10/7/2021	14:12:50	D	3.60
57	TARN TARAN	KHADUR SAHIB	S-NPP	31.40330	75.09680	10/7/2021	12:33:16	D	2.30
58	TARN TARAN	KHADUR SAHIB	S-NPP	31.40360	75.06510	10/7/2021	14:12:50	D	5.10
59	TARN TARAN	KHADUR SAHIB	S-NPP	31.40560	75.09650	10/7/2021	12:33:16	D	2.70
60	TARN TARAN	KHADUR SAHIB	S-NPP	31.40630	75.10300	10/7/2021	14:12:50	D	3.60
61	TARN TARAN	KHADUR SAHIB	S-NPP	31.42000	75.14010	10/7/2021	14:12:50	D	3.20
62	TARN TARAN	KHADUR SAHIB	S-NPP	31.42500	75.14220	10/7/2021	14:12:50	D	9.00

63	TARN TARAN	KHADUR SAHIB	S-NPP	31.42560	75.15070	10/7/2021	14:12:50	D	7.40
64	TARN TARAN	KHADUR SAHIB	S-NPP	31.42620	75.14810	10/7/2021	14:12:50	D	4.60
65	TARN TARAN	KHADUR SAHIB	S-NPP	31.46290	75.08190	10/7/2021	12:33:16	D	2.30
66	TARN TARAN	KHADUR SAHIB	S-NPP	31.47400	75.20670	10/7/2021	14:12:50	D	2.20
67	TARN TARAN	KHADUR SAHIB	S-NPP	31.47480	75.05300	10/7/2021	14:12:50	D	3.20
68	TARN TARAN	KHADUR SAHIB	S-NPP	31.48010	75.04830	10/7/2021	14:12:50	D	3.70
69	TARN TARAN	KHADUR SAHIB	S-NPP	31.48240	75.08190	10/7/2021	14:12:50	D	3.50
70	TARN TARAN	PATTI	S-NPP	31.15960	74.81910	10/7/2021	14:12:50	D	3.10
71	TARN TARAN	PATTI	S-NPP	31.15990	74.82320	10/7/2021	14:12:50	D	3.10
72	TARN TARAN	TARN TARAN	S-NPP	31.52880	75.03940	10/7/2021	14:12:50	D	1.80

Details of residue burning events in Haryana on 07-Oct-2021

S. No.	District	Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	AMBALA	NARAINGARH	S-NPP	30.39500	77.13770	10/7/2021	12:33:16	D	2.90
2	KAITHAL	KAITHAL	S-NPP	29.83240	76.36060	10/7/2021	14:12:50	D	2.90
3	KAITHAL	KAITHAL	S-NPP	29.83710	76.35730	10/7/2021	14:12:50	D	6.40
4	KAITHAL	KAITHAL	S-NPP	29.83830	76.36020	10/7/2021	14:12:50	D	2.90
5	KARNAL	ASSANDH	S-NPP	29.54310	76.80120	10/7/2021	14:12:50	D	2.80
6	KARNAL	ASSANDH	S-NPP	29.55360	76.58080	10/7/2021	14:12:50	D	5.30
7	KARNAL	GHARAUNDA	S-NPP	29.52000	77.03910	10/7/2021	14:12:50	D	13.30
8	KARNAL	GHARAUNDA	S-NPP	29.52030	77.04430	10/7/2021	14:12:50	D	15.10
9	KARNAL	GHARAUNDA	S-NPP	29.56900	77.04090	10/7/2021	14:12:50	D	3.80
10	KARNAL	GHARAUNDA	S-NPP	29.58610	77.01430	10/7/2021	14:12:50	D	2.90
11	PALWAL	HASSANPUR	S-NPP	28.01120	77.38740	10/7/2021	14:12:50	D	4.00

Details of residue burning events in Uttar Pradesh on 07-Oct-2021

S. No.	District	Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	RAMPUR	BILASPUR	S-NPP	28.92490	79.23700	10/7/2021	12:33:16	D	2.80
2	SHAHJAHANPUR	PUWANYA	S-NPP	28.14090	80.12930	10/7/2021	14:12:50	D	5.50
3	SHAHJAHANPUR	PUWANYA	S-NPP	28.14450	80.12870	10/7/2021	14:12:50	D	9.90
4	SHAHJAHANPUR	PUWANYA	S-NPP	28.15920	80.21470	10/7/2021	14:12:50	D	6.90
5	SHAHJAHANPUR	PUWANYA	S-NPP	28.15960	80.22250	10/7/2021	14:12:50	D	11.00
6	SHAHJAHANPUR	PUWANYA	S-NPP	28.15970	80.16060	10/7/2021	12:33:16	D	1.90
7	SHAHJAHANPUR	PUWANYA	S-NPP	28.16020	80.16160	10/7/2021	12:33:16	D	1.60
8	SHAHJAHANPUR	PUWANYA	S-NPP	28.16230	80.21400	10/7/2021	14:12:50	D	5.90
9	SHAHJAHANPUR	PUWANYA	S-NPP	28.16270	80.22190	10/7/2021	14:12:50	D	5.90
10	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.92380	79.90260	10/7/2021	12:33:16	D	10.90
11	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.92470	79.90630	10/7/2021	12:33:16	D	16.90
12	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	28.00040	79.87950	10/7/2021	12:33:16	D	3.50
13	SITAPUR	LAHARPUR	S-NPP	27.76030	80.84300	10/7/2021	12:33:16	D	1.80

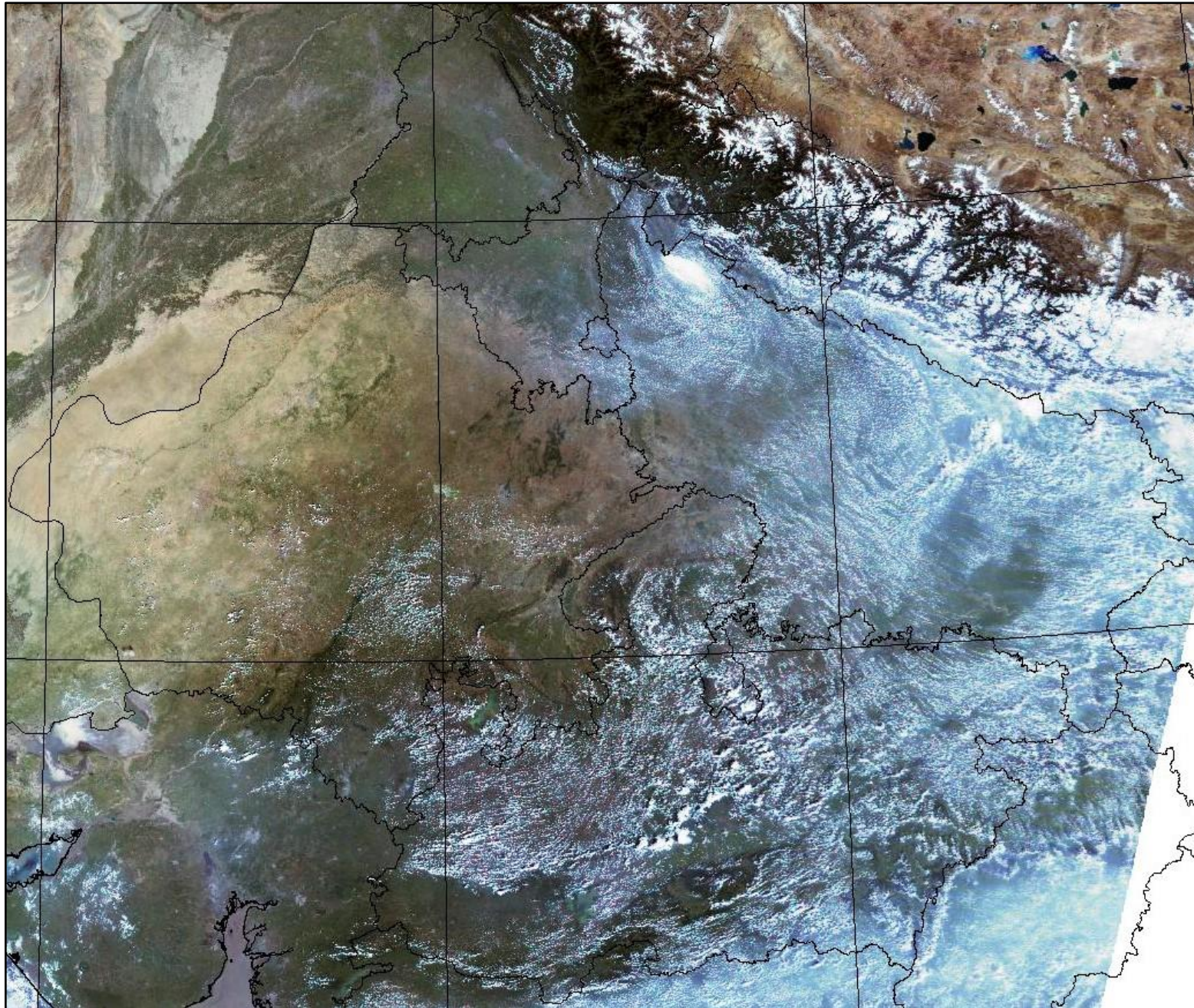
Details of residue burning events in Rajasthan on 07-Oct-2021

S. No.	District	Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	HANUMANGARH	TIBI	S-NPP	29.60280	74.49710	10/7/2021	14:12:50	D	1.60

Details of residue burning events in Madhya Pradesh on 07-Oct-2021

S. No.	District	Block	Satellite	Latitude	Longitude	ACQ_DATE	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	EAST NIMAR	HARSUD	S-NPP	21.96890	76.80540	10/7/2021	14:12:50	D	3.80

TERRA (MODIS) Satellite image (TCC) of North and Central India Acquired on 07-Oct-2021 at 11:14:20 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)
