



Bulletin No. 19

Events Date:
03-Oct-2022

Issued on:
03-Oct-2022



MONITORING PADDY RESIDUE BURNING IN INDIA USING SATELLITE REMOTE SENSING DURING 2022



Prepared by:

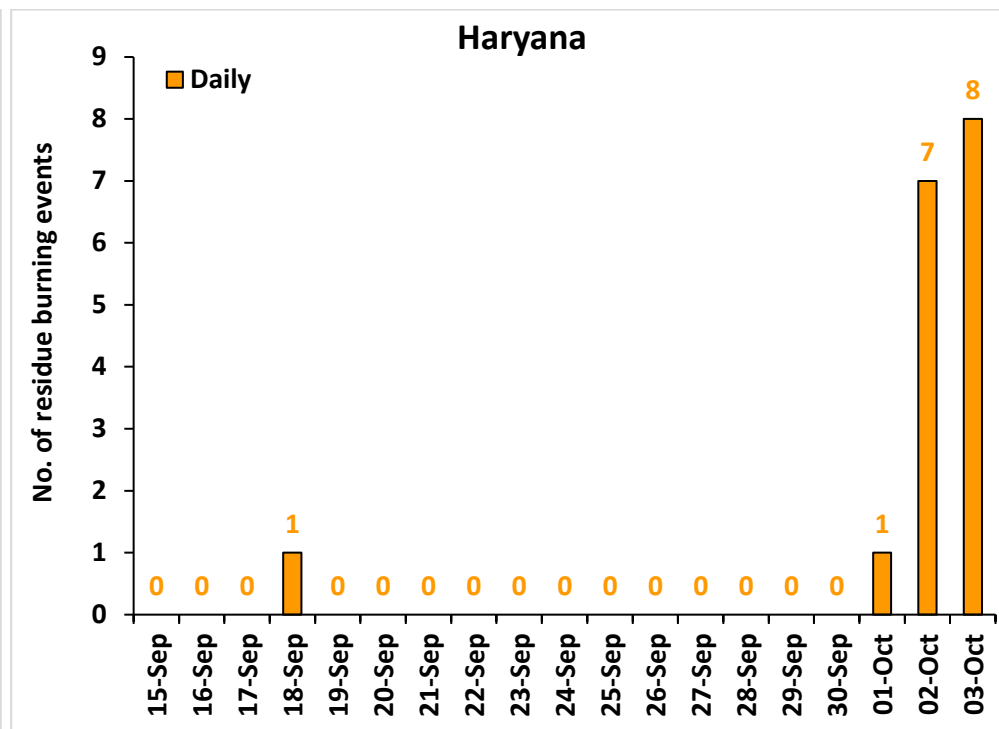
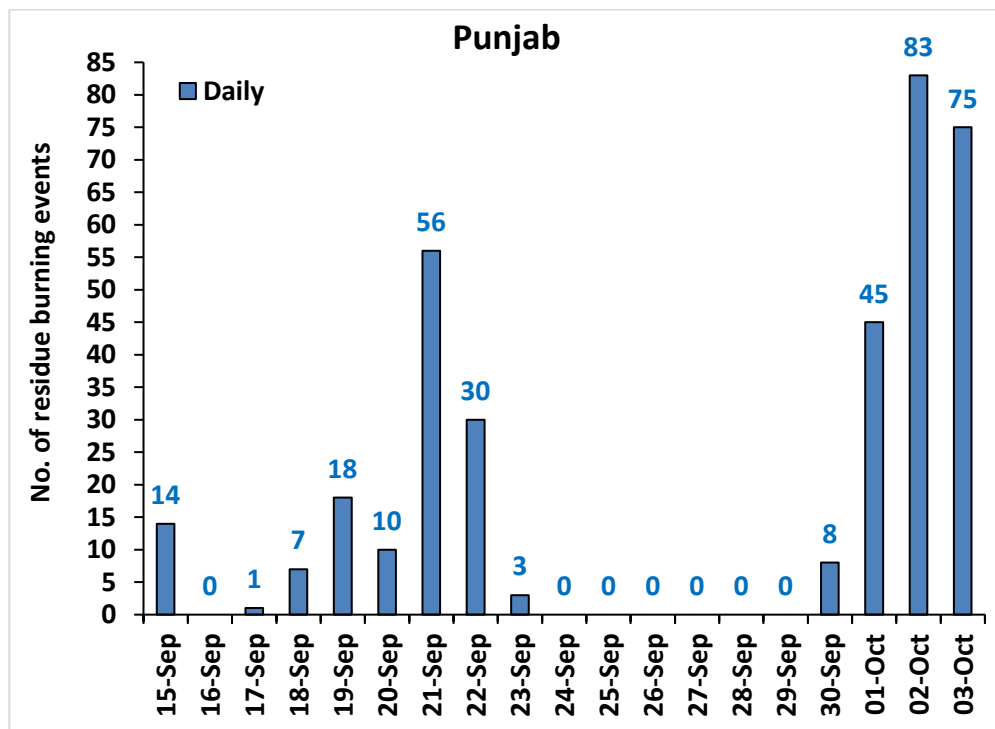
Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012

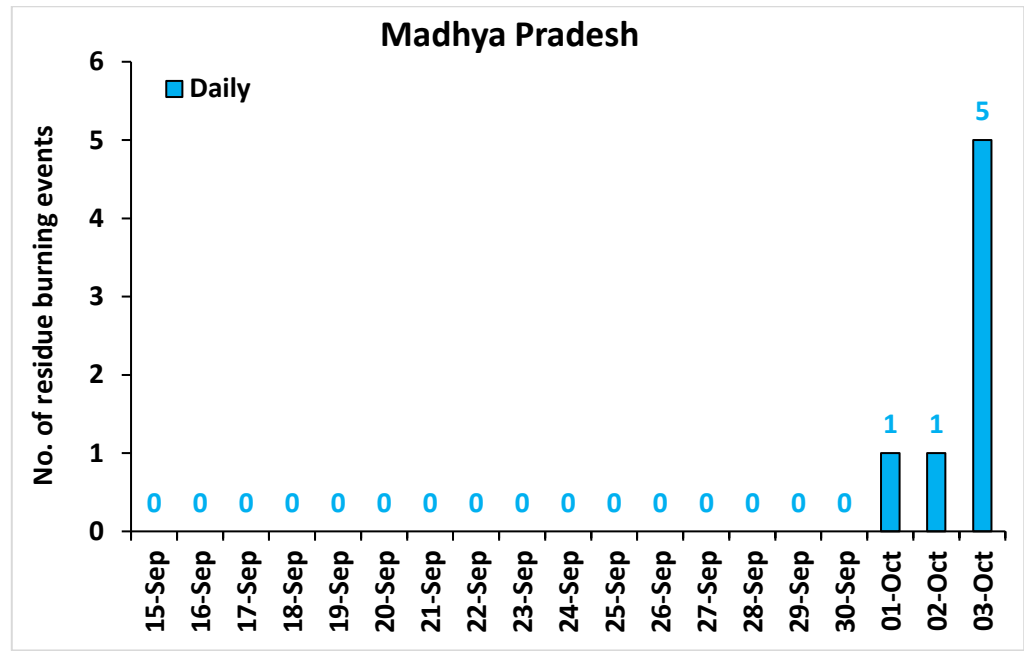
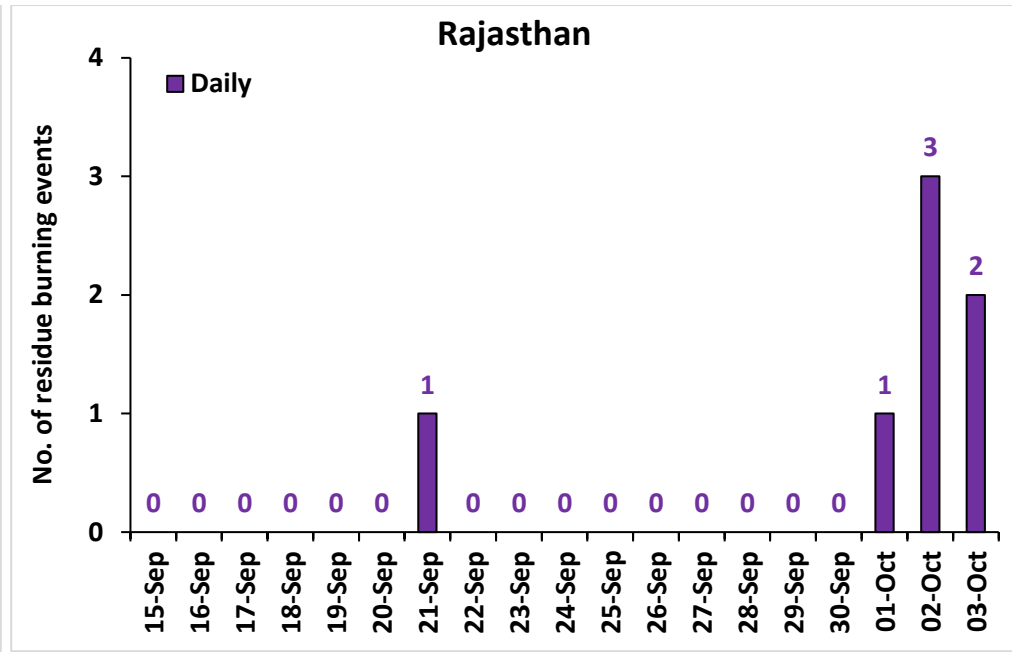
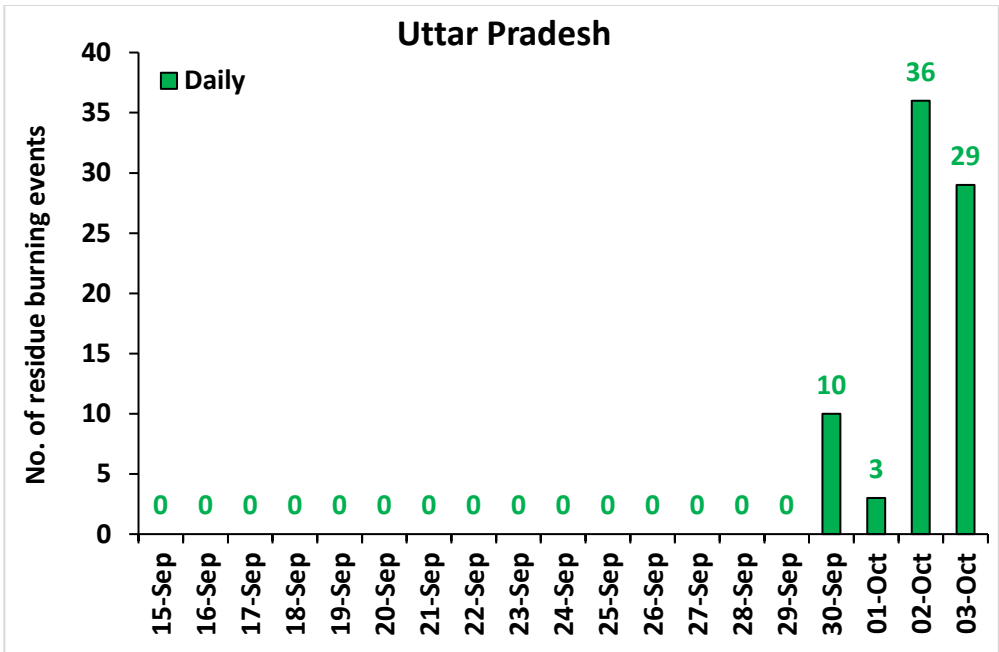
<http://creams.iari.res.in>

Highlights for 03-Oct-2022

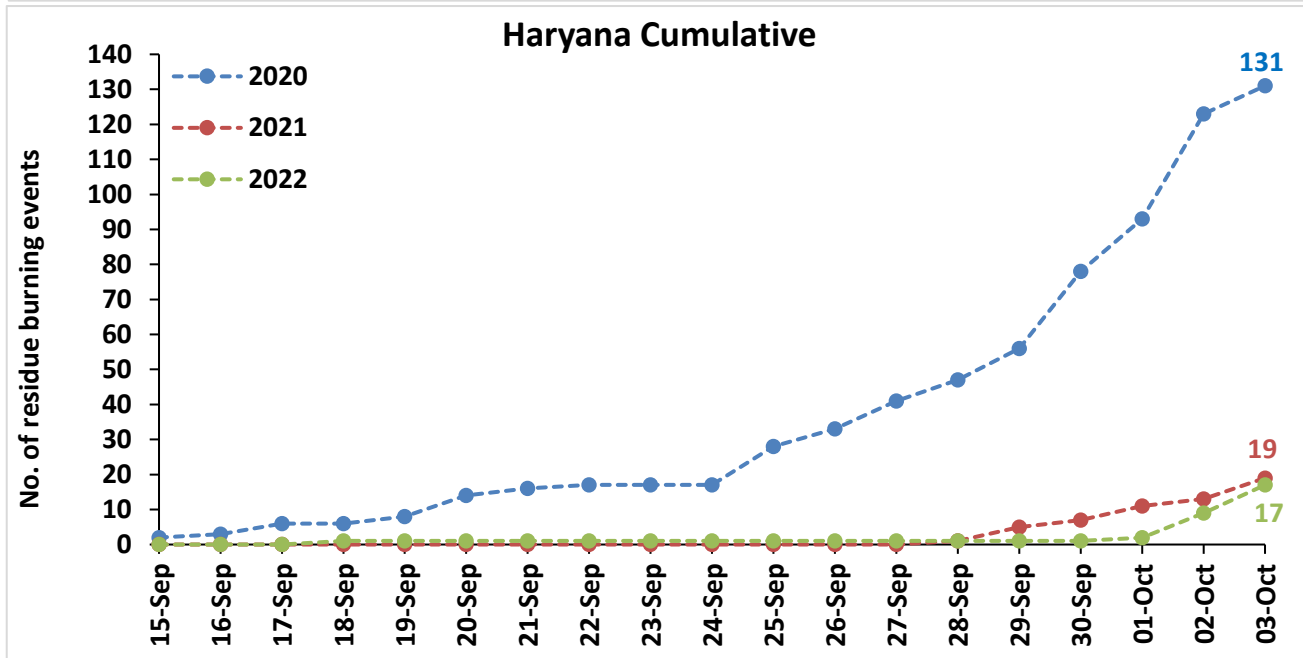
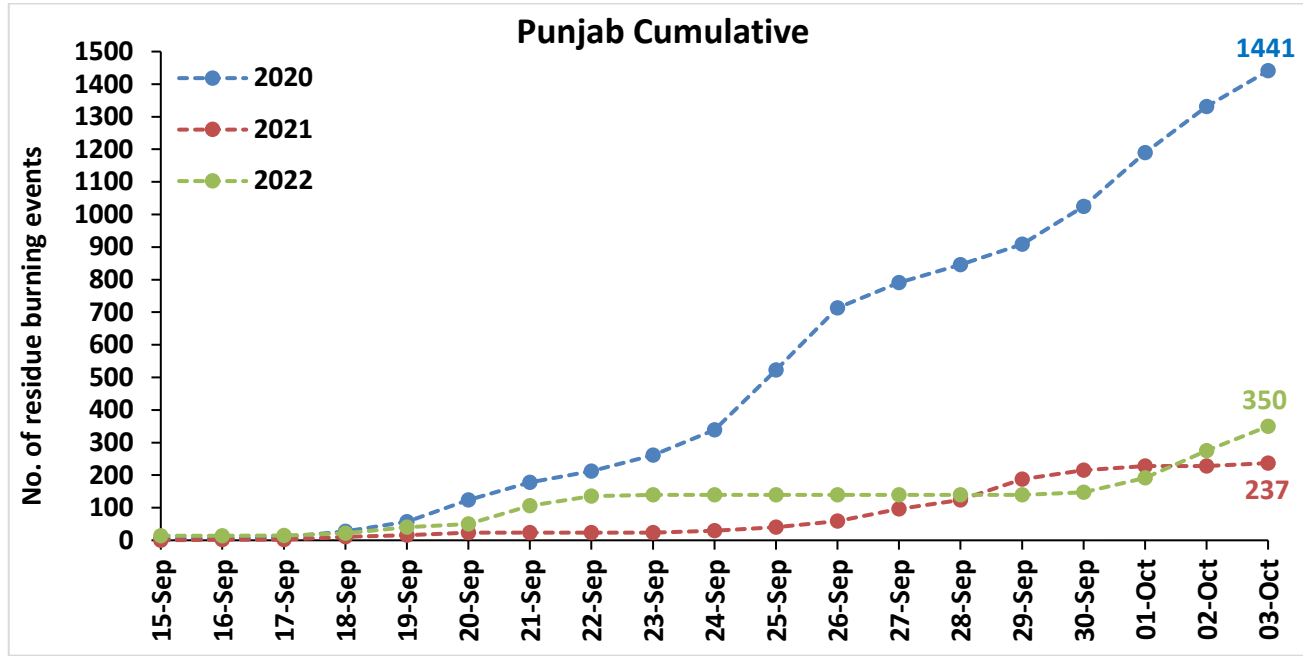
- The active fire events due to rice residue burning were monitored using satellite remote sensing, following the "Standard Protocol for Estimation of Crop Residue Burning Fire Events using Satellite Data".
- Satellites detected **119** residue burning events in the six study States on 03-Oct-2022.
- The state wise events detected on 03-Oct-2022 were **75** in Punjab, **8** in Haryana, **29** in UP, **0** in Delhi, **2** in Rajasthan and **5** in MP.
- Total **456** burning events were detected in the six states between 15-Sept-2022 and 03-Oct-2022, which are distributed as **350**, **17**, **78**, **0**, **7** and **7** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.

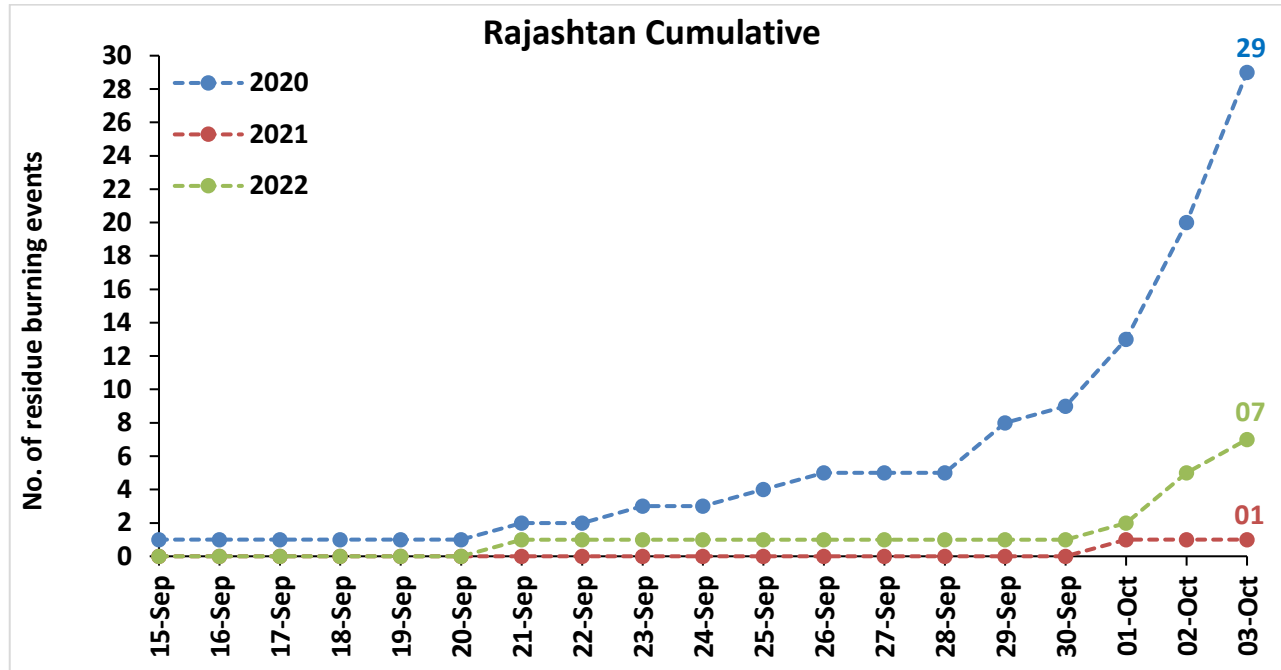
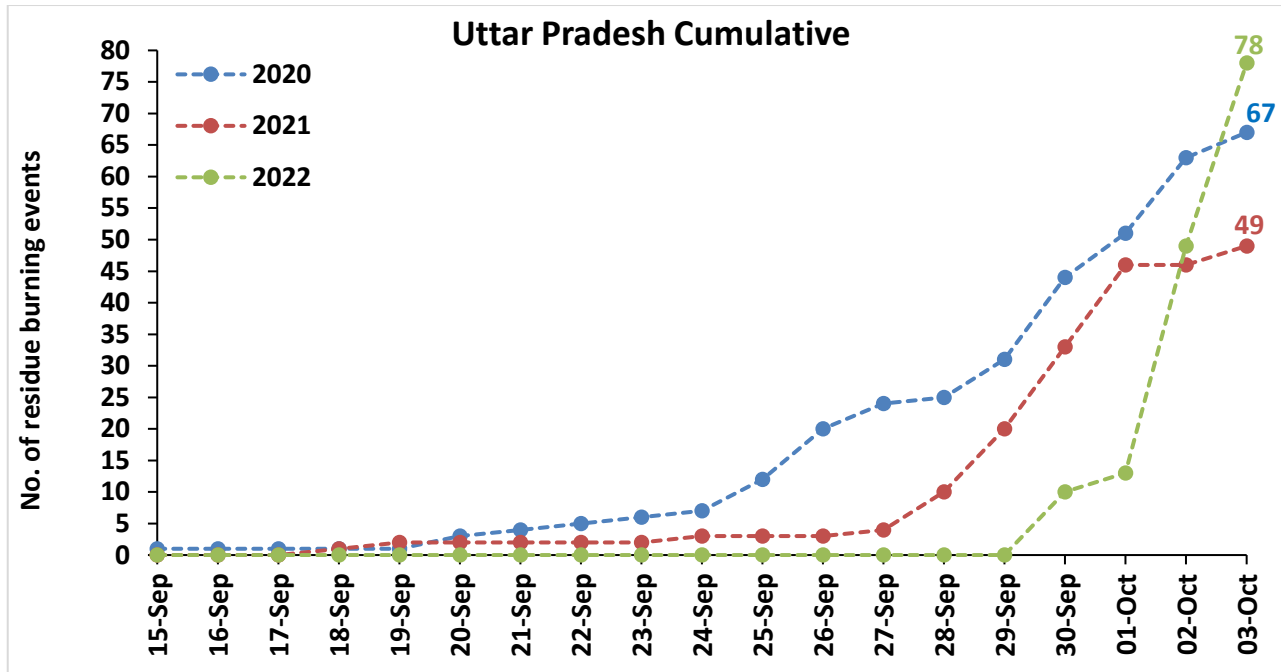
Temporal distribution of rice residue burning events for the study States in 2022

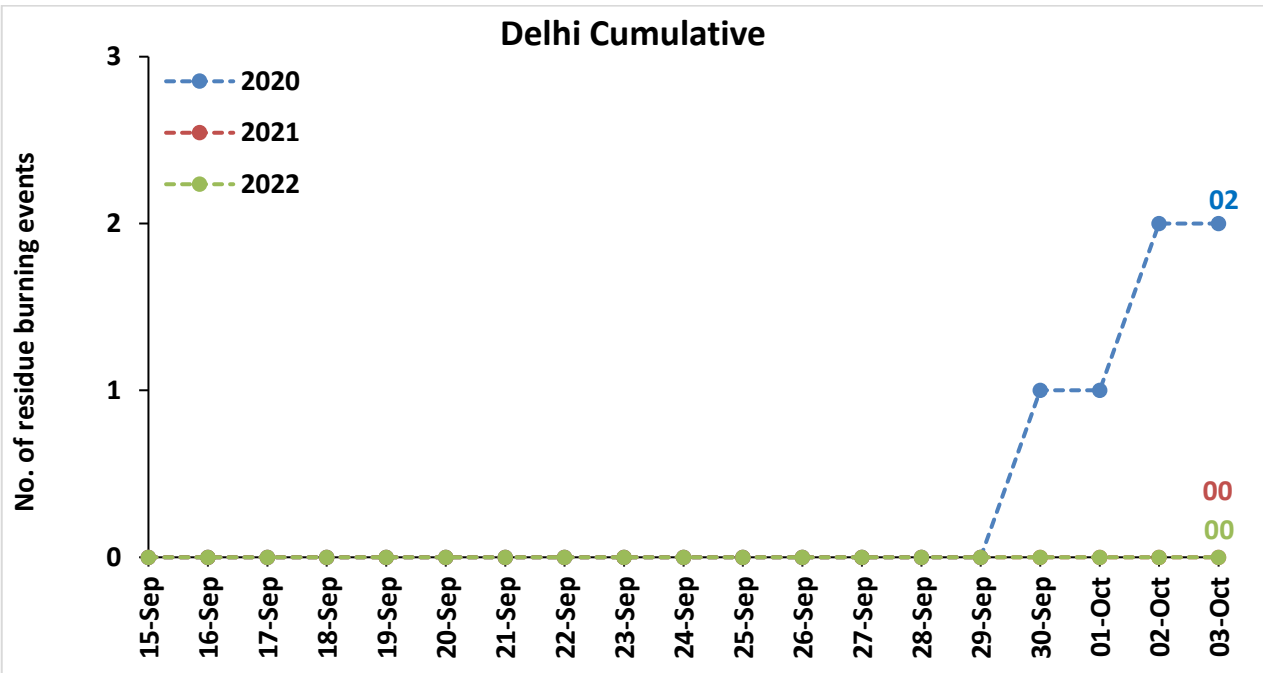
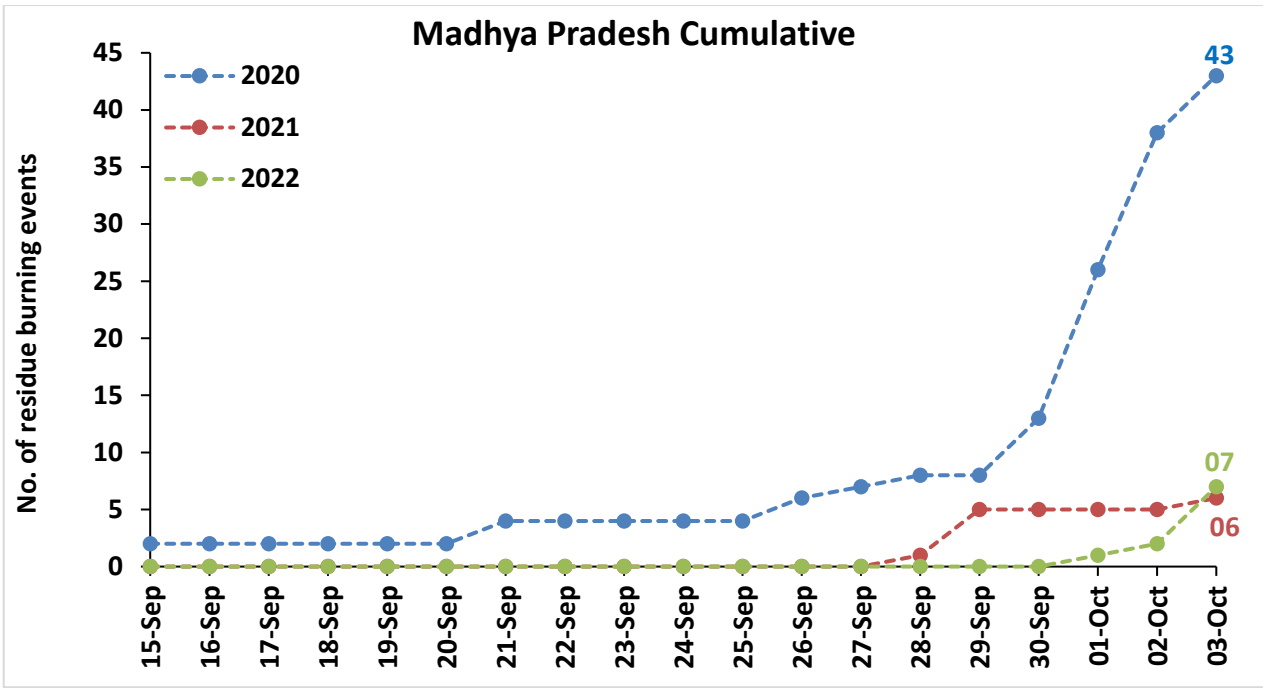




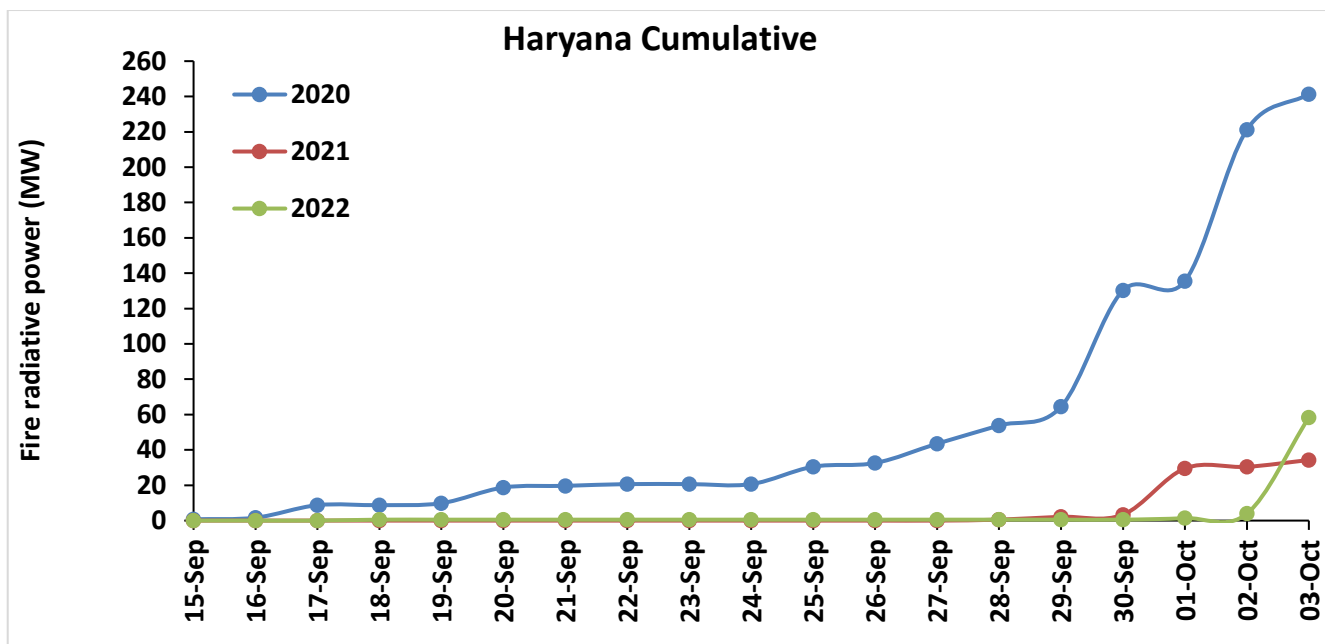
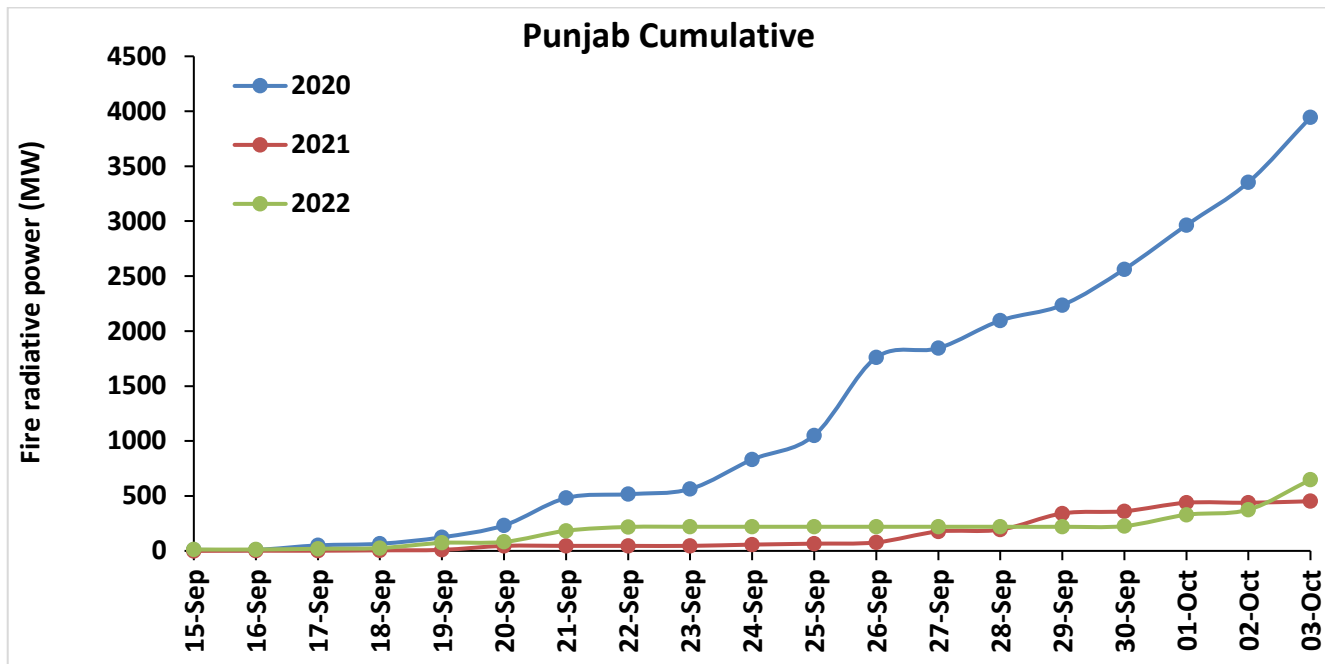
Comparison of residue burning events in current year (2022) with previous years (2020 and 2021) for the study States

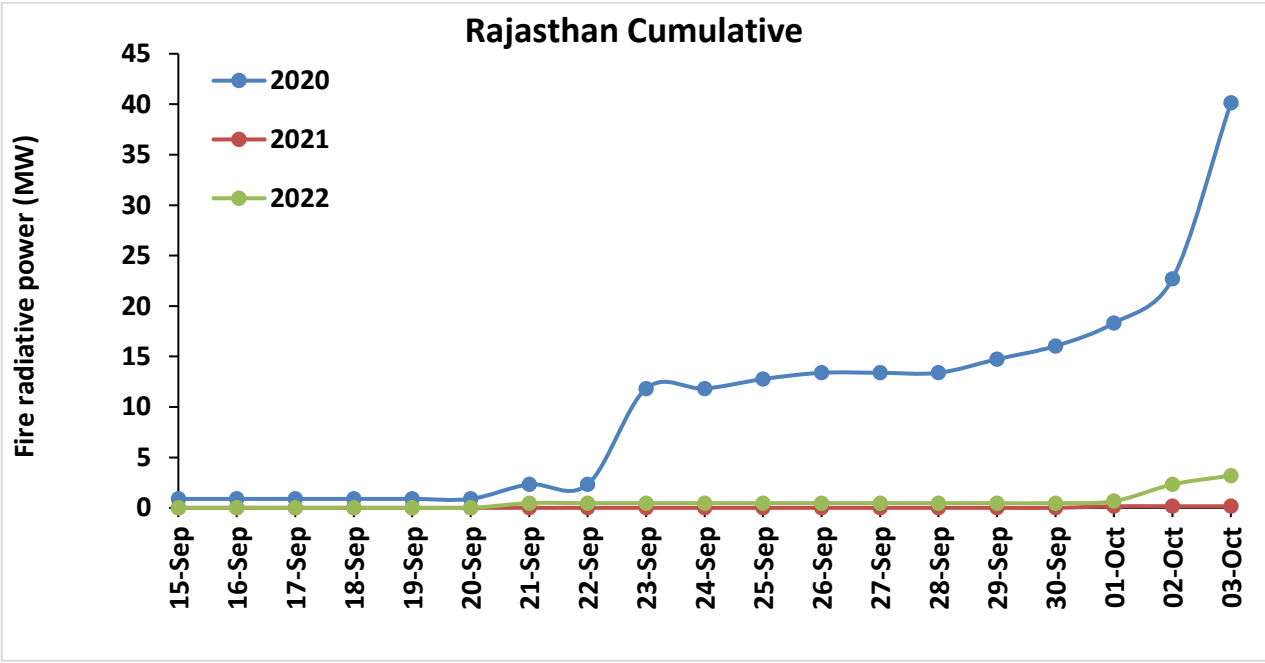
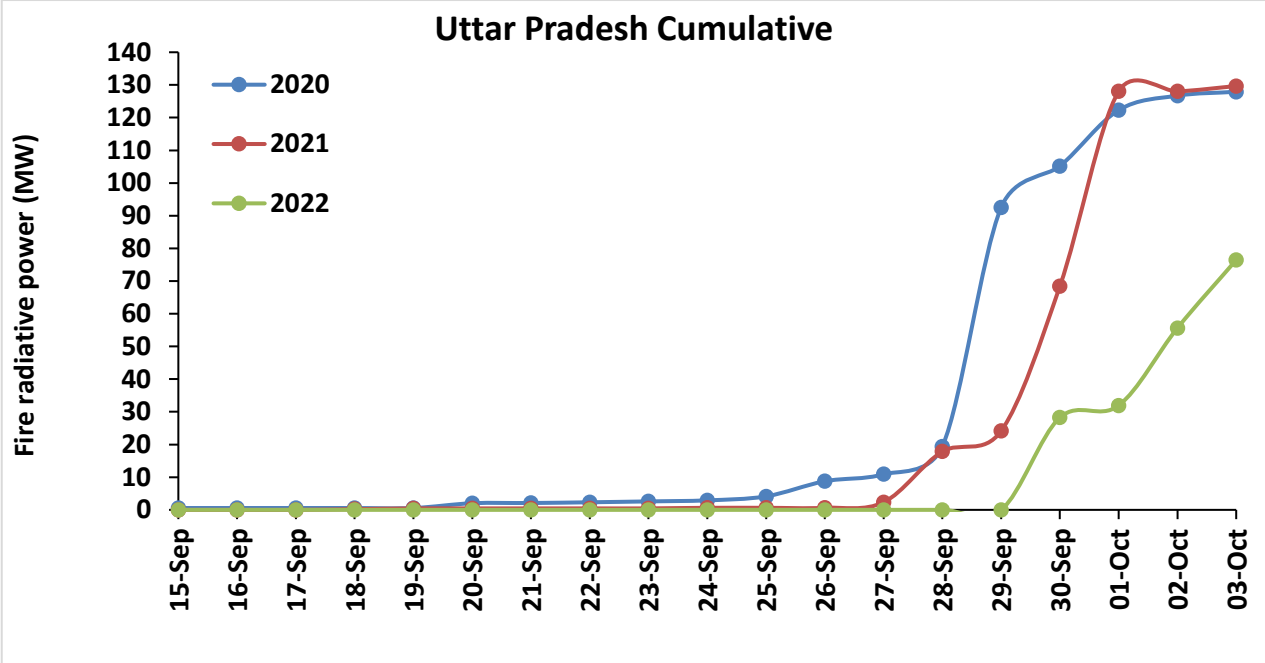


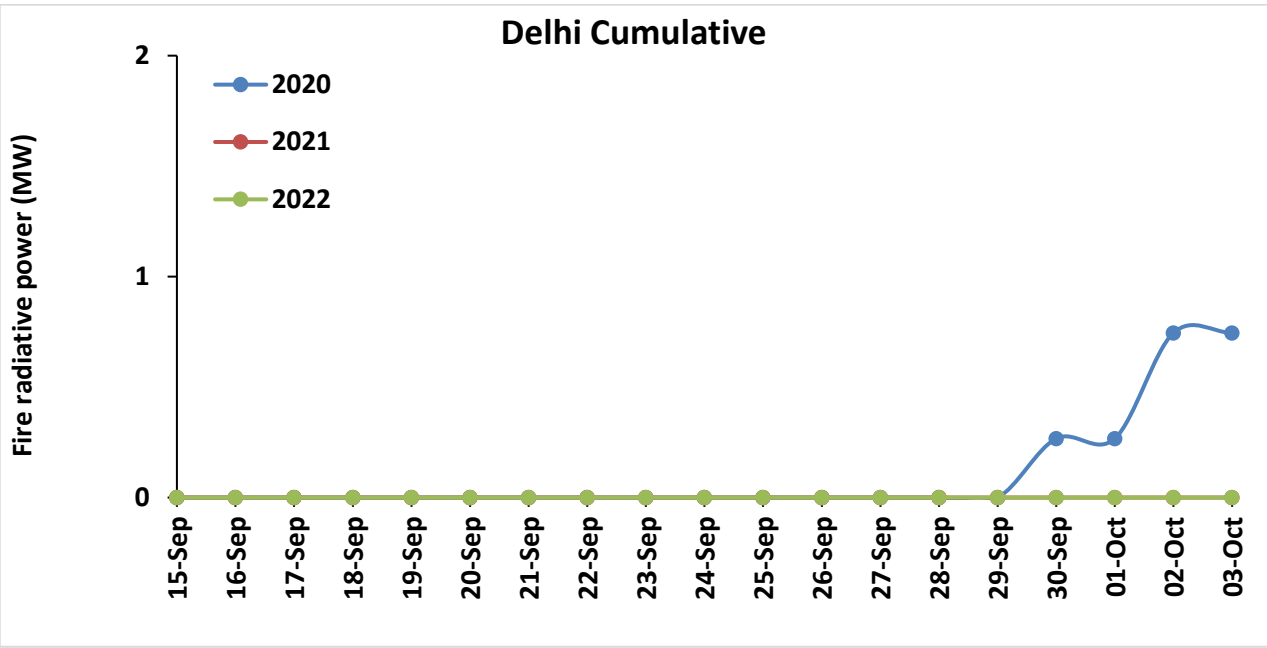
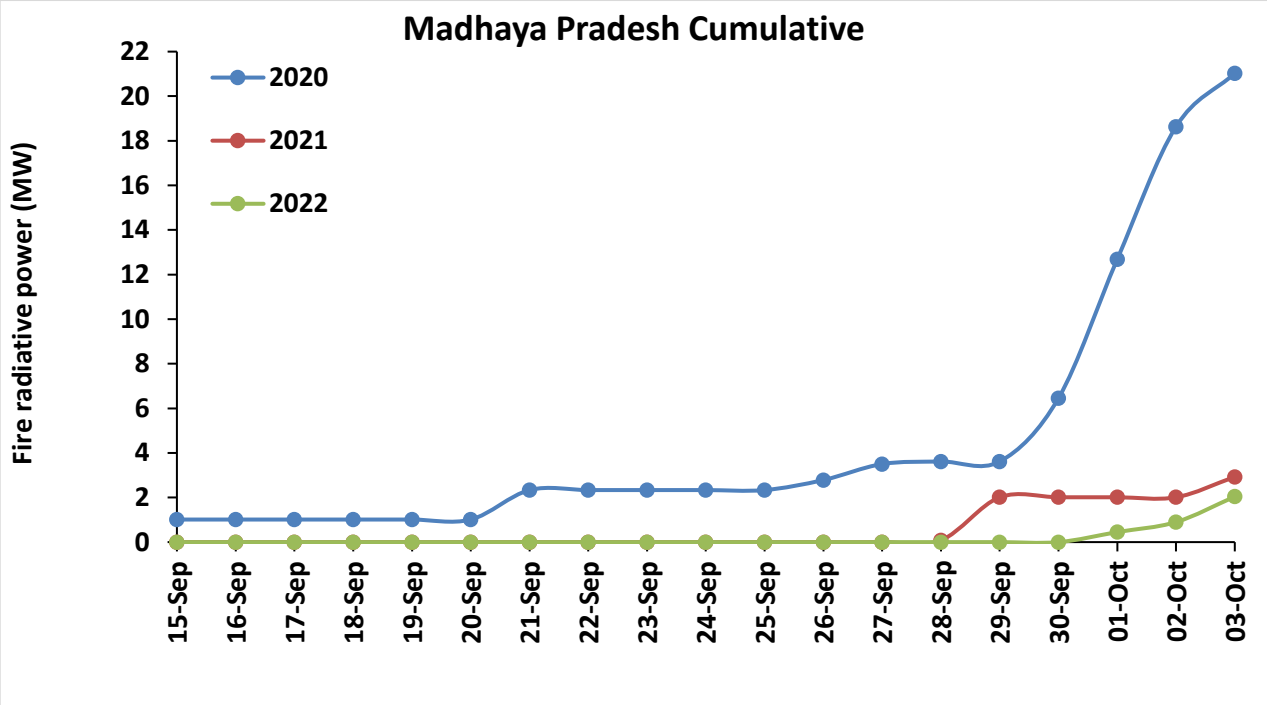




Comparison of residue burning fire power in current year (2022) with previous years (2021 and 2020) for the study States

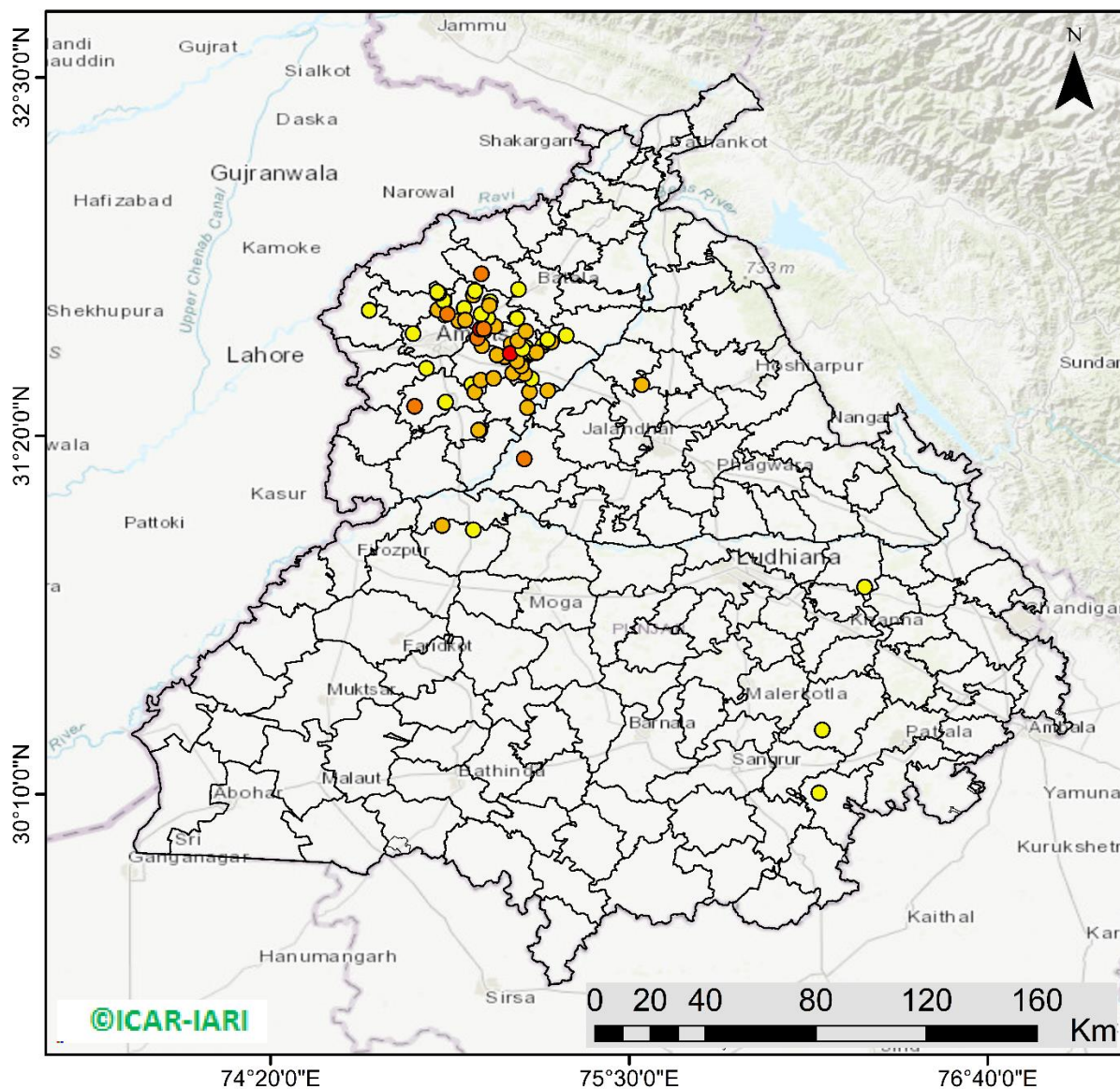






Punjab

RICE RESIDUE BURNING IN PUNJAB



75 burning events detected in Punjab during (03rd Oct 2022)

Fire Intensity (W/m²)

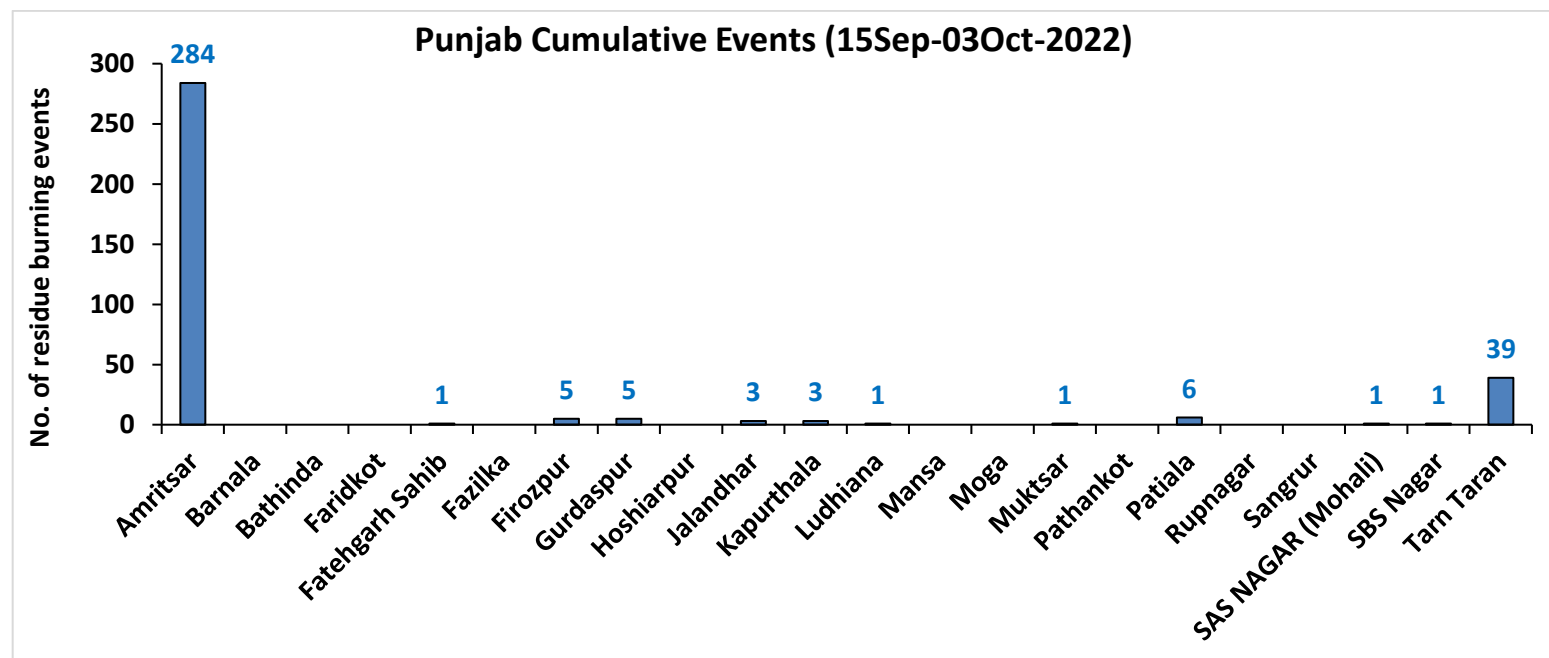
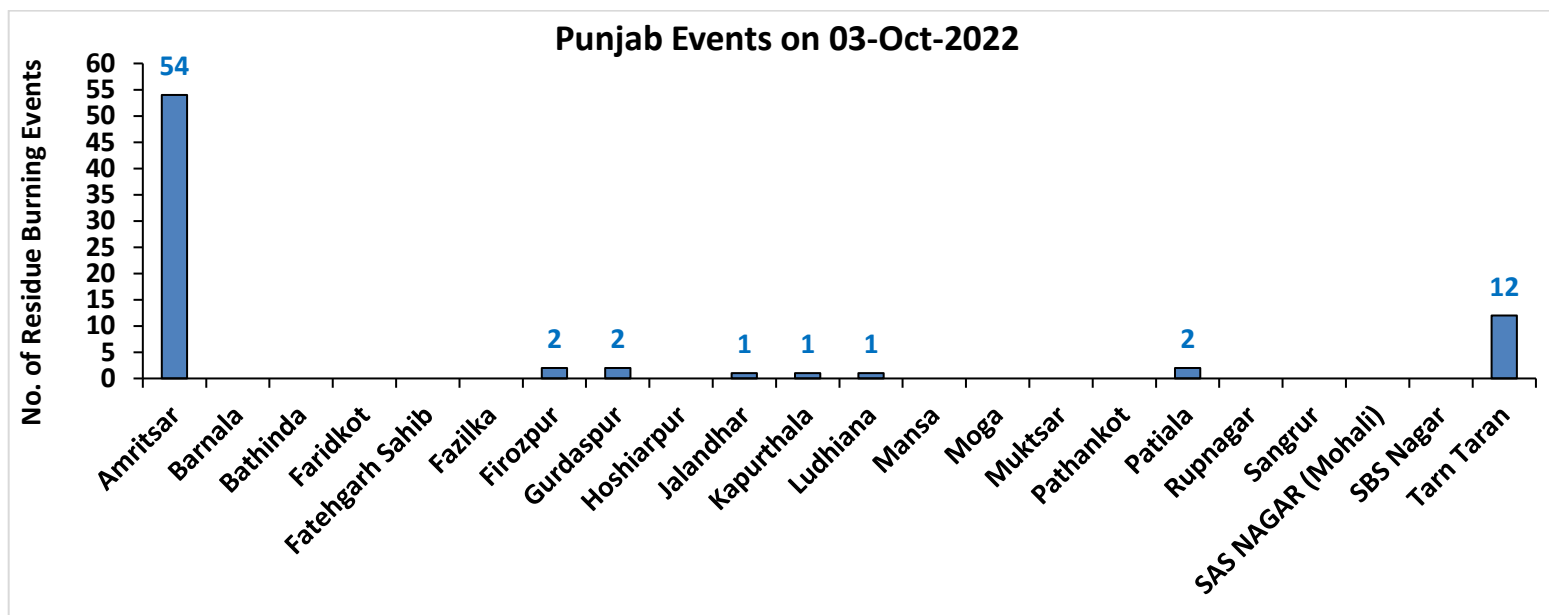
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20



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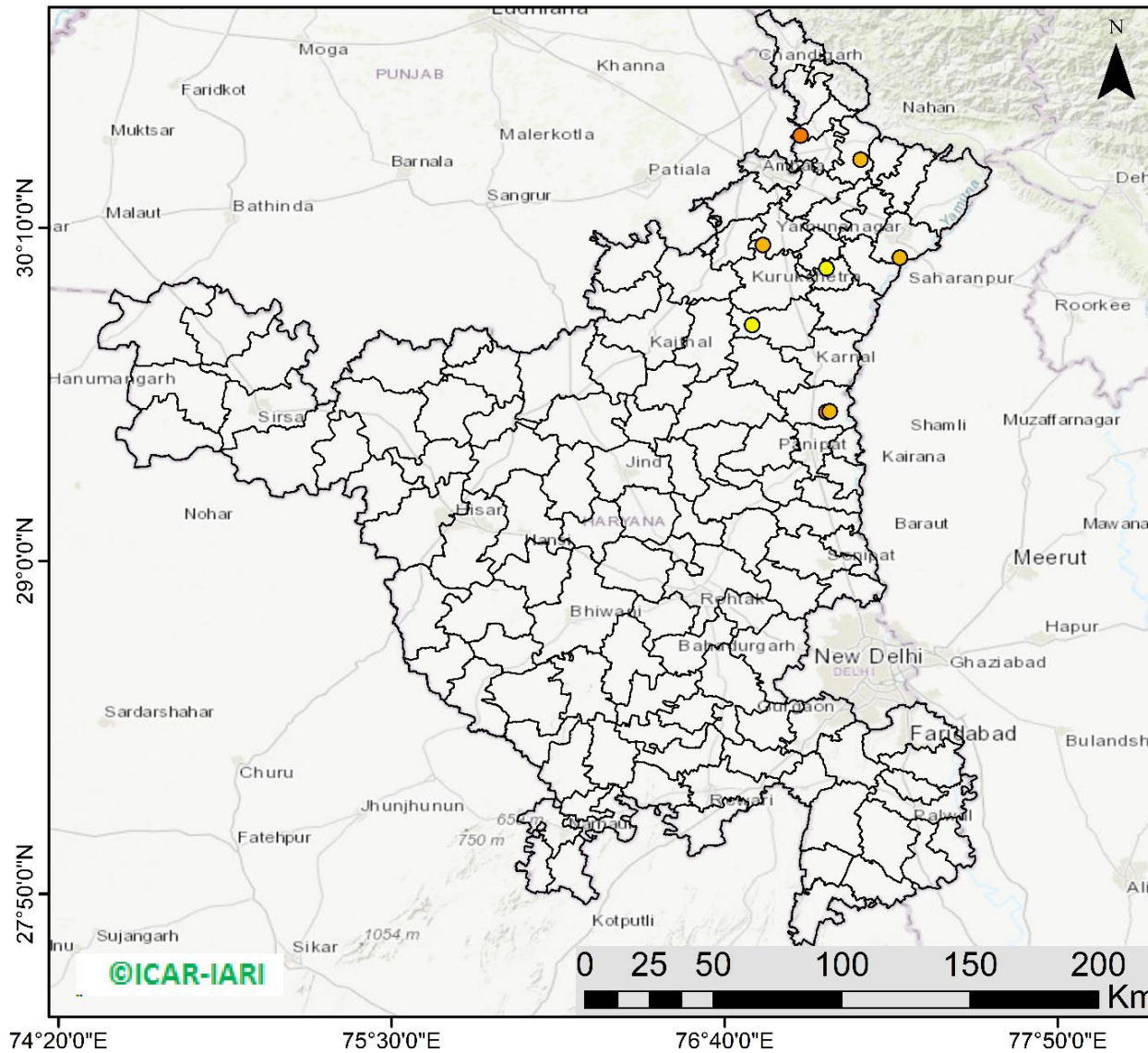
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (15Sep- 03Oct-2022)



Haryana

RICE RESIDUE BURNING IN HARYANA



08 burning events detected in Haryana on (03rd Oct 2022)

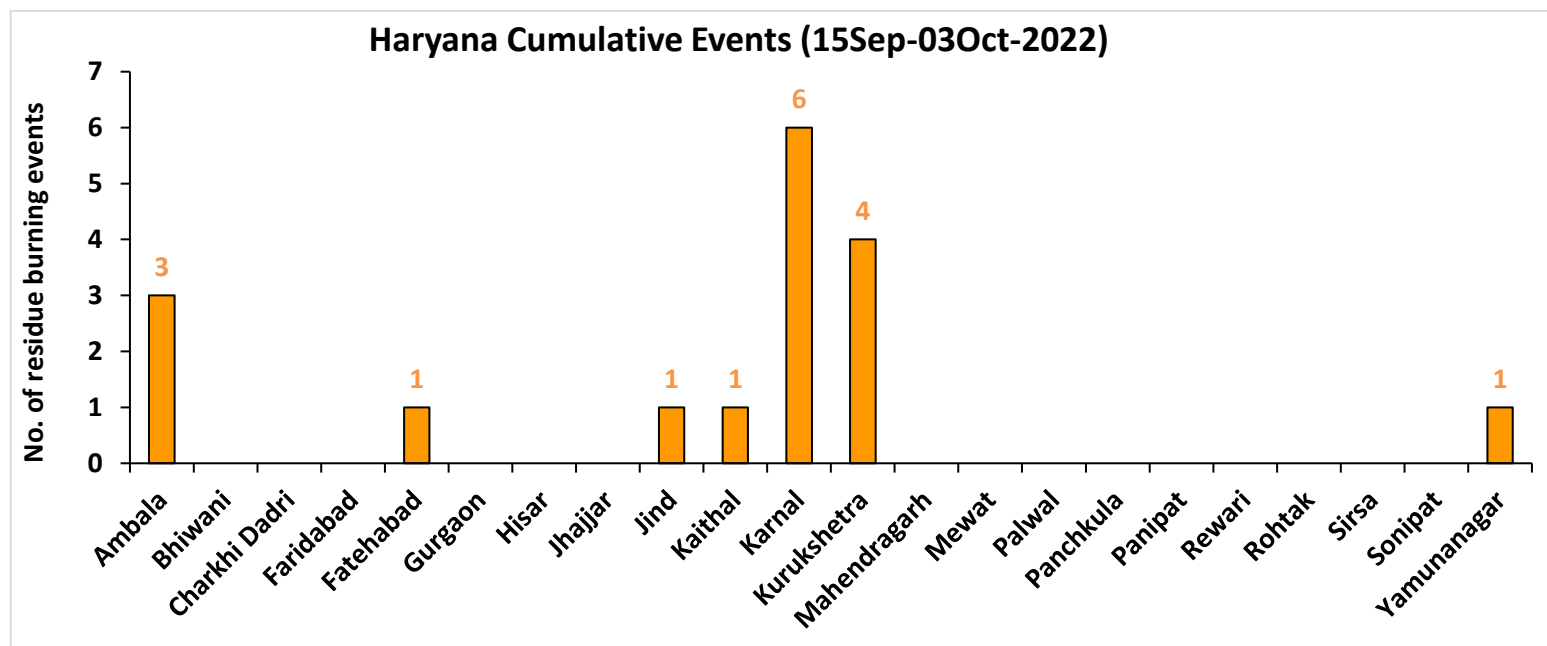
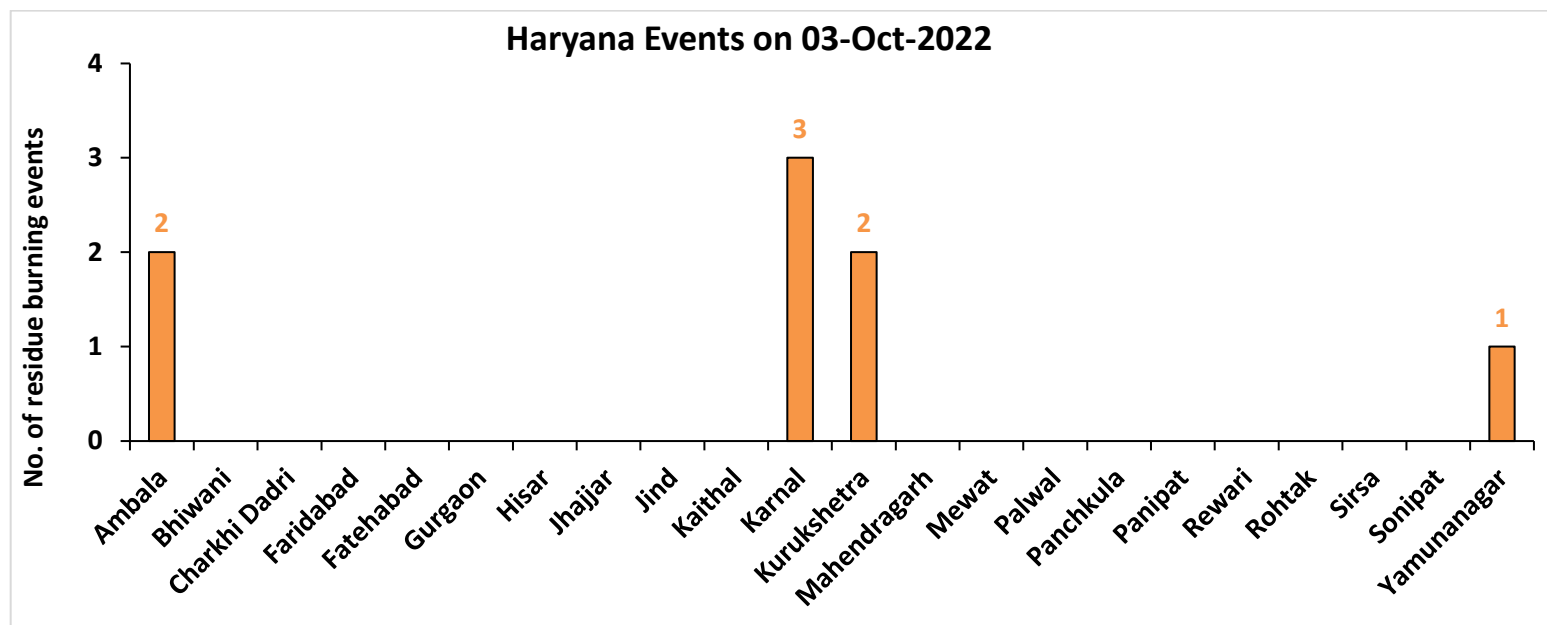
Fire Intensity (W/m²)

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



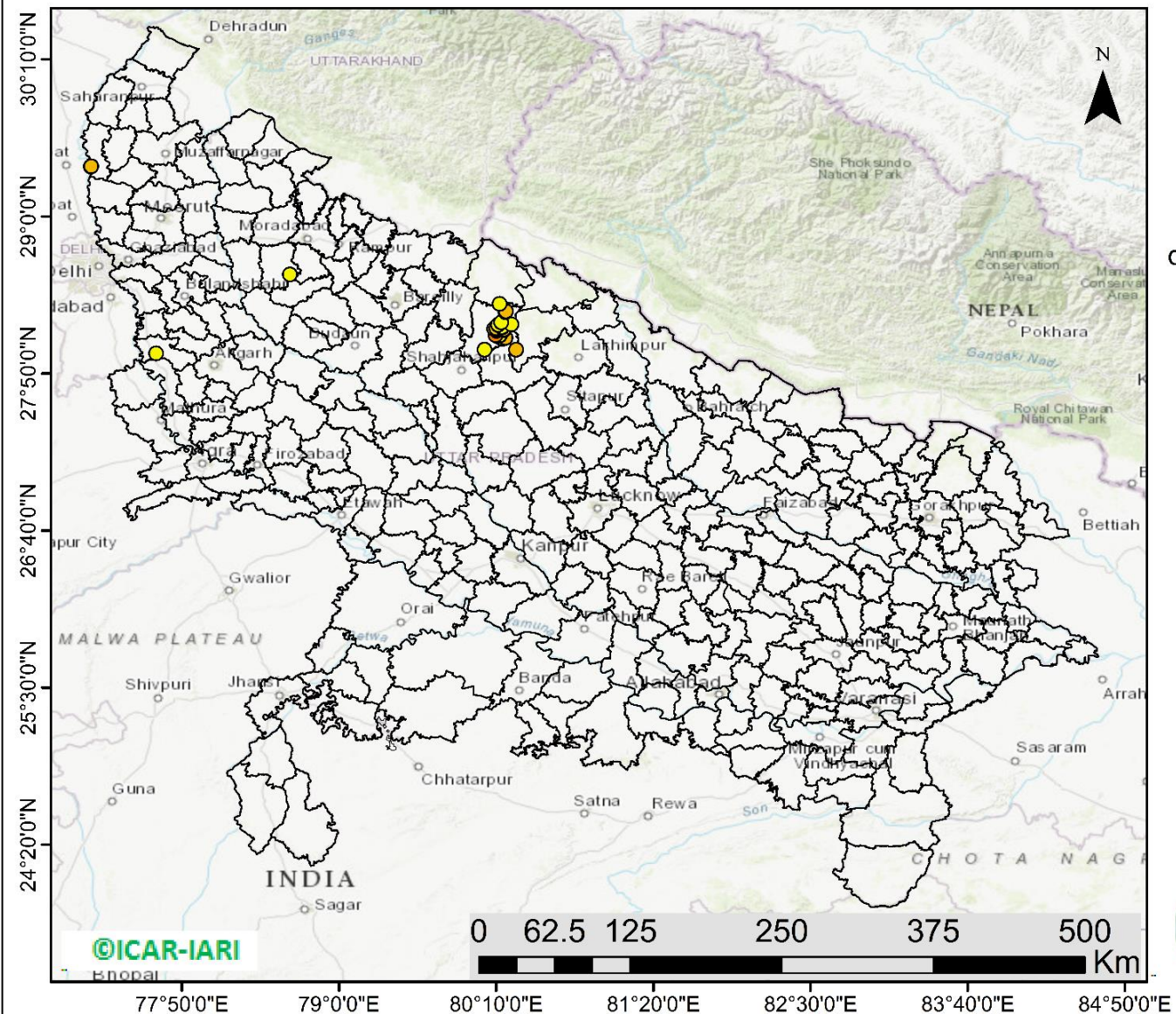
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Haryana (15Sep- 03Oct-2022)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



29 burning events detected in Uttar Pradesh on (03rd Oct 2022)

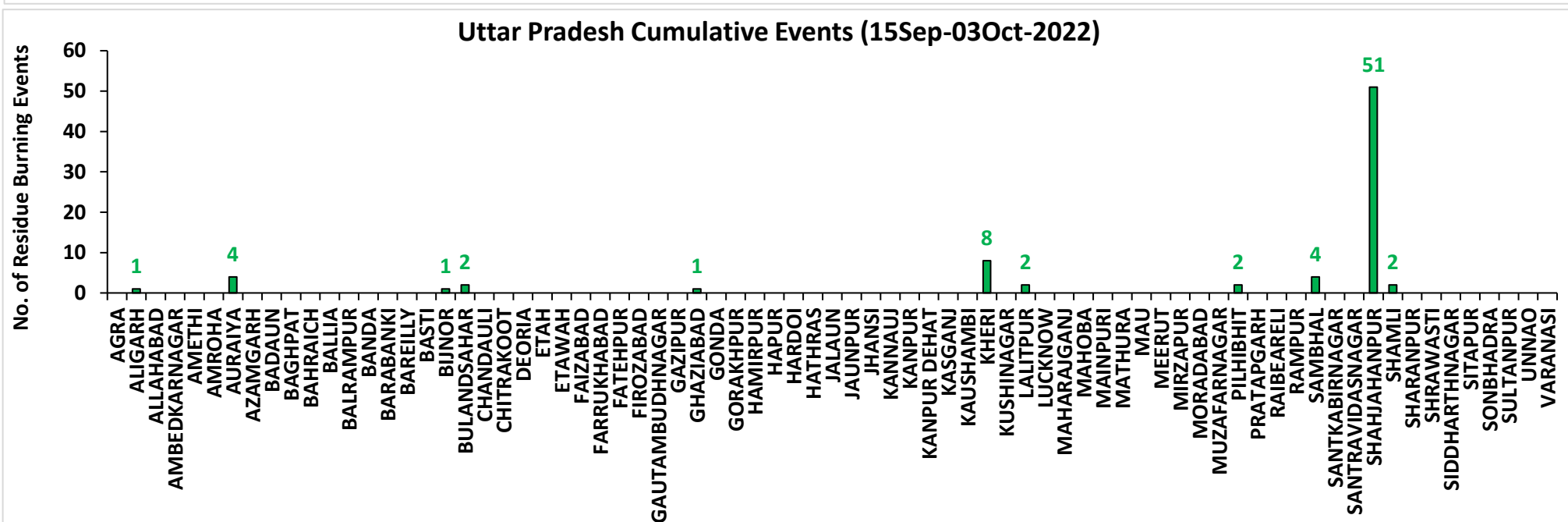
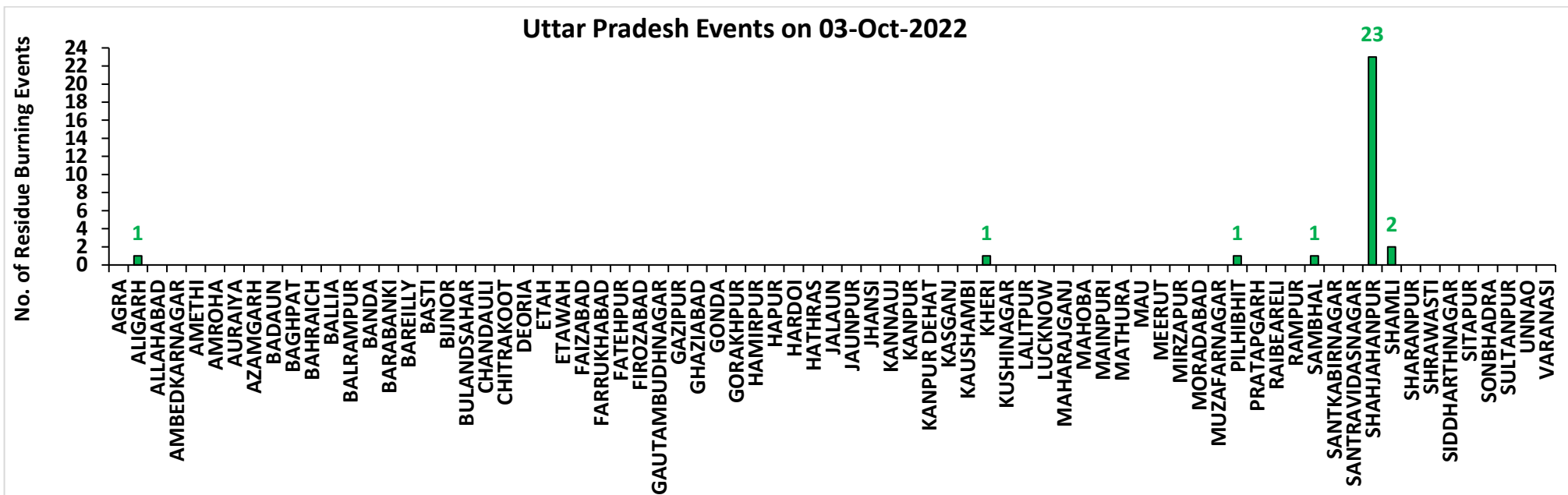
Fire Intensity (W/m²)

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



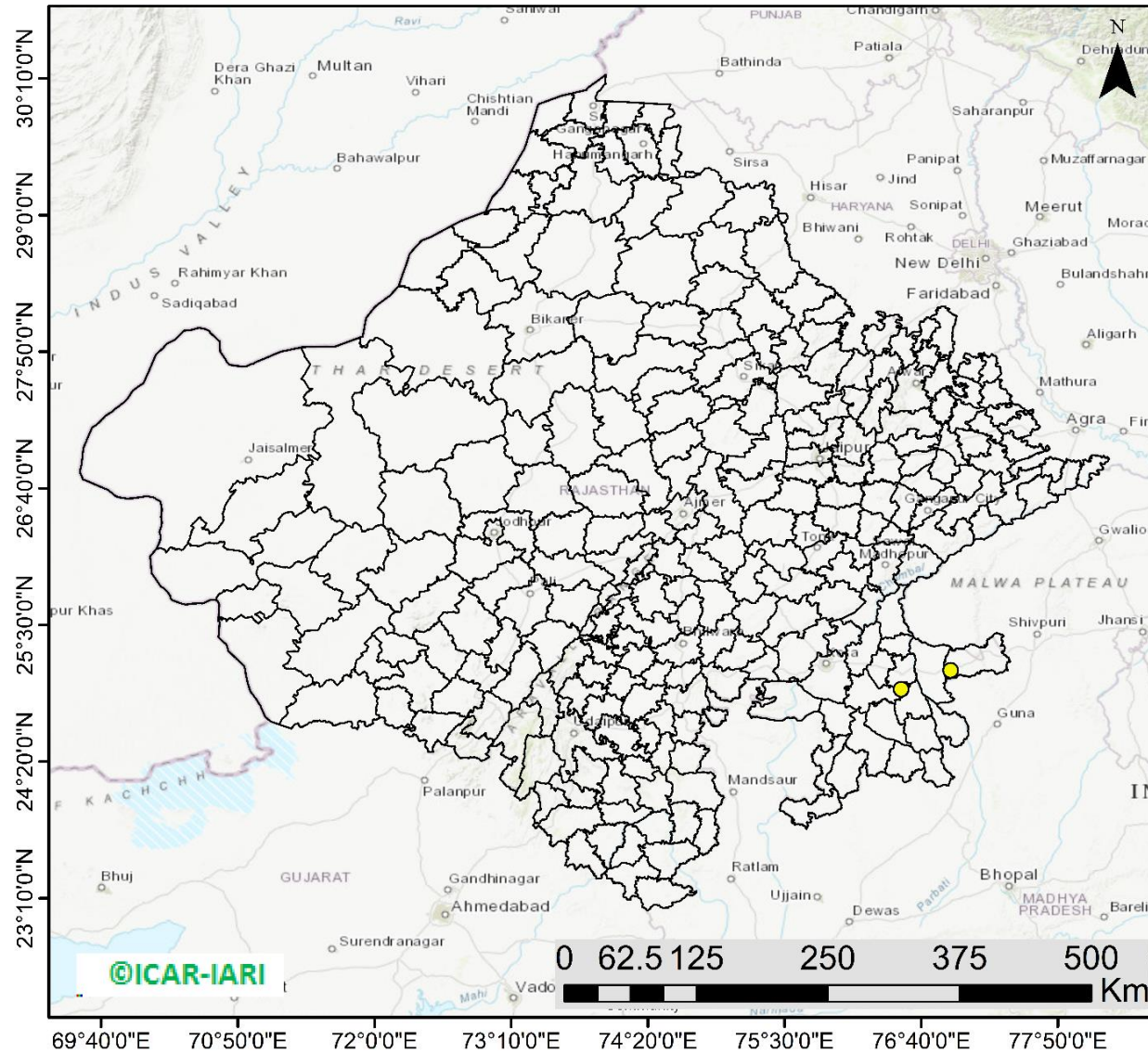
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep- 03Oct-2022)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



02 burning events detected in Rajasthan on (03rd Oct 2022)

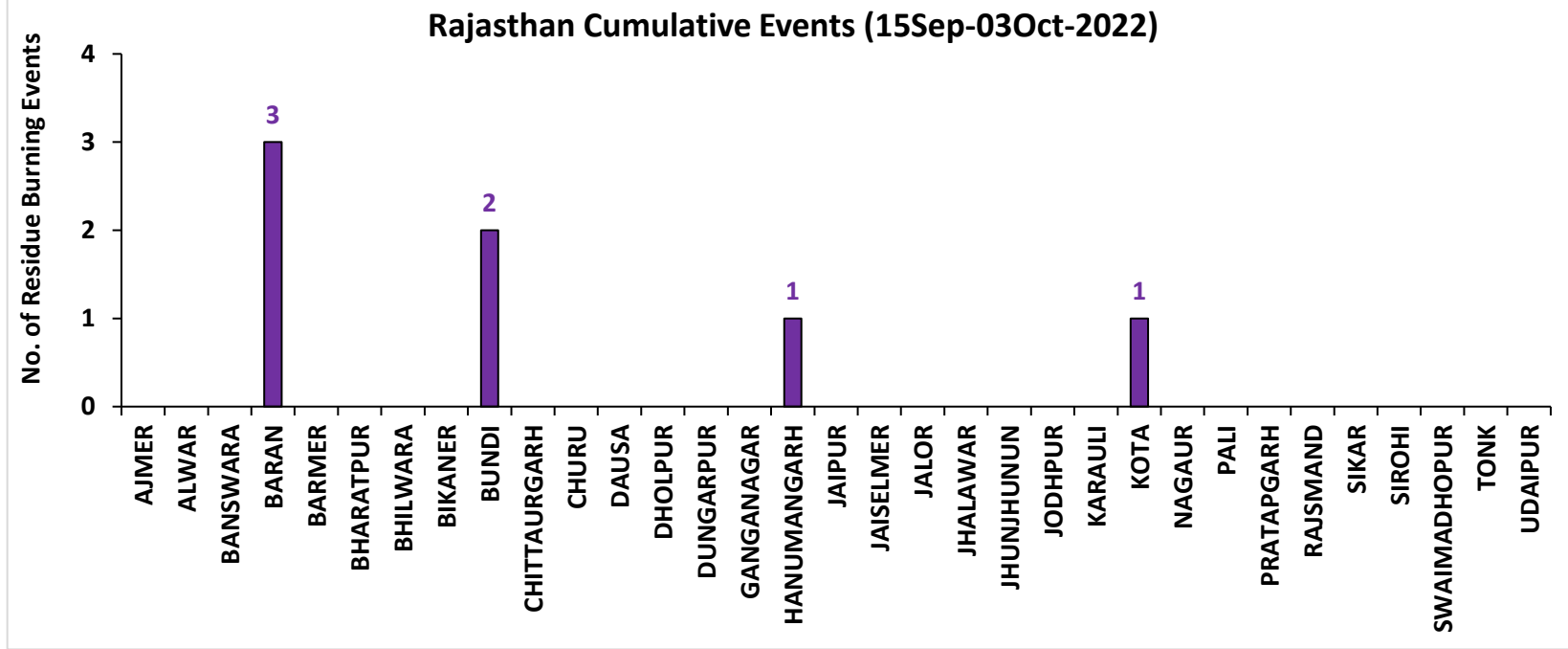
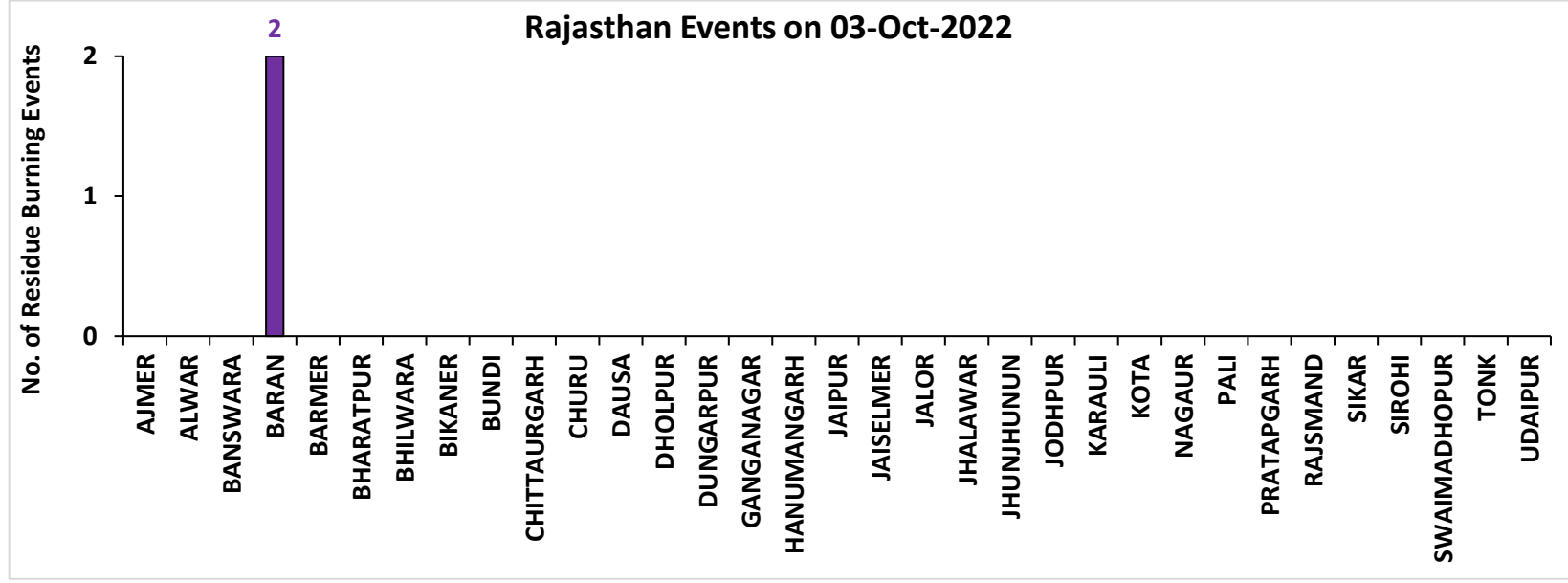
Fire Intensity (W/m²)

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



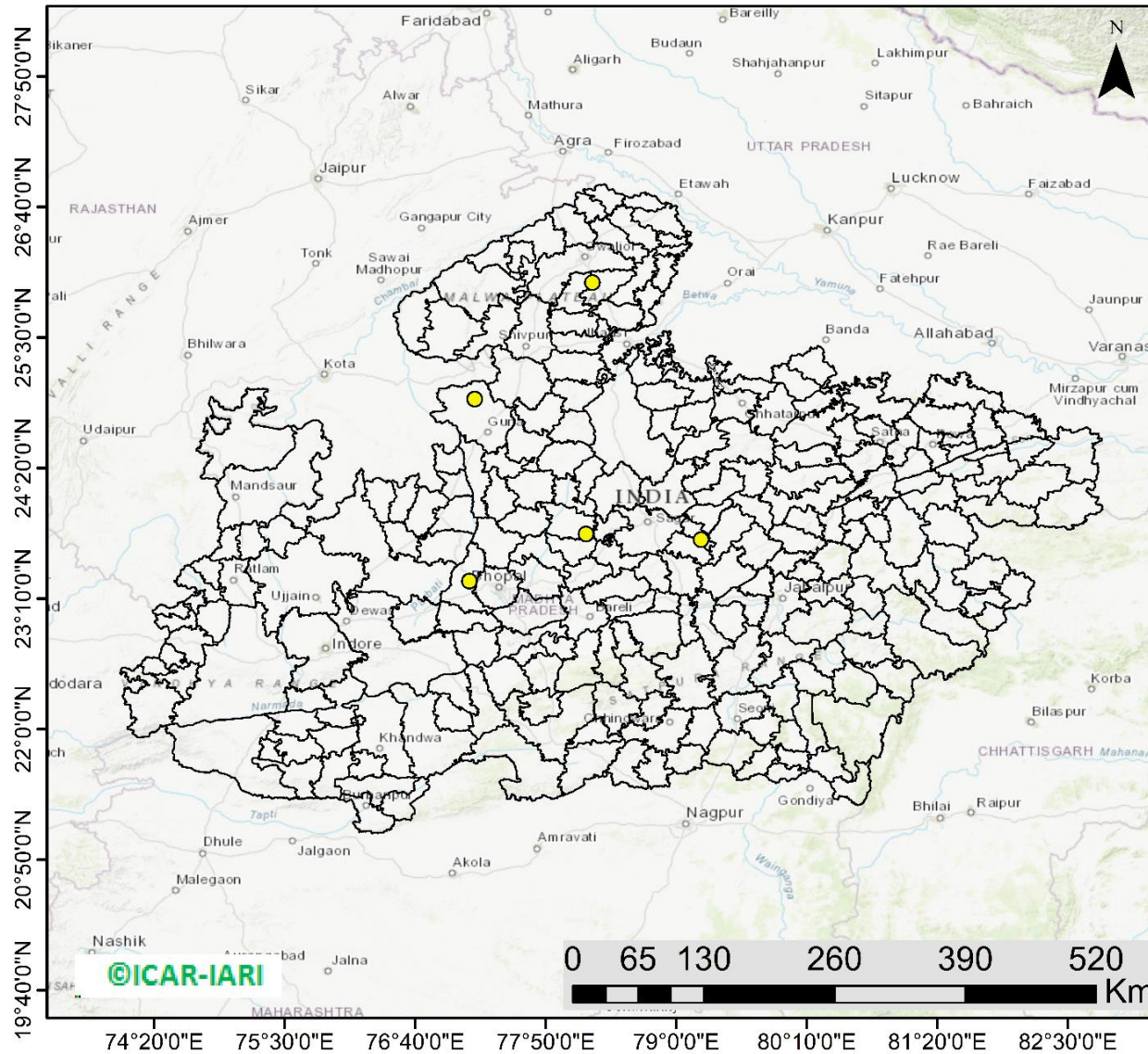
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15Sep- 03Oct -2022)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



05 burning events detected in MP on (03rd Oct 2022)

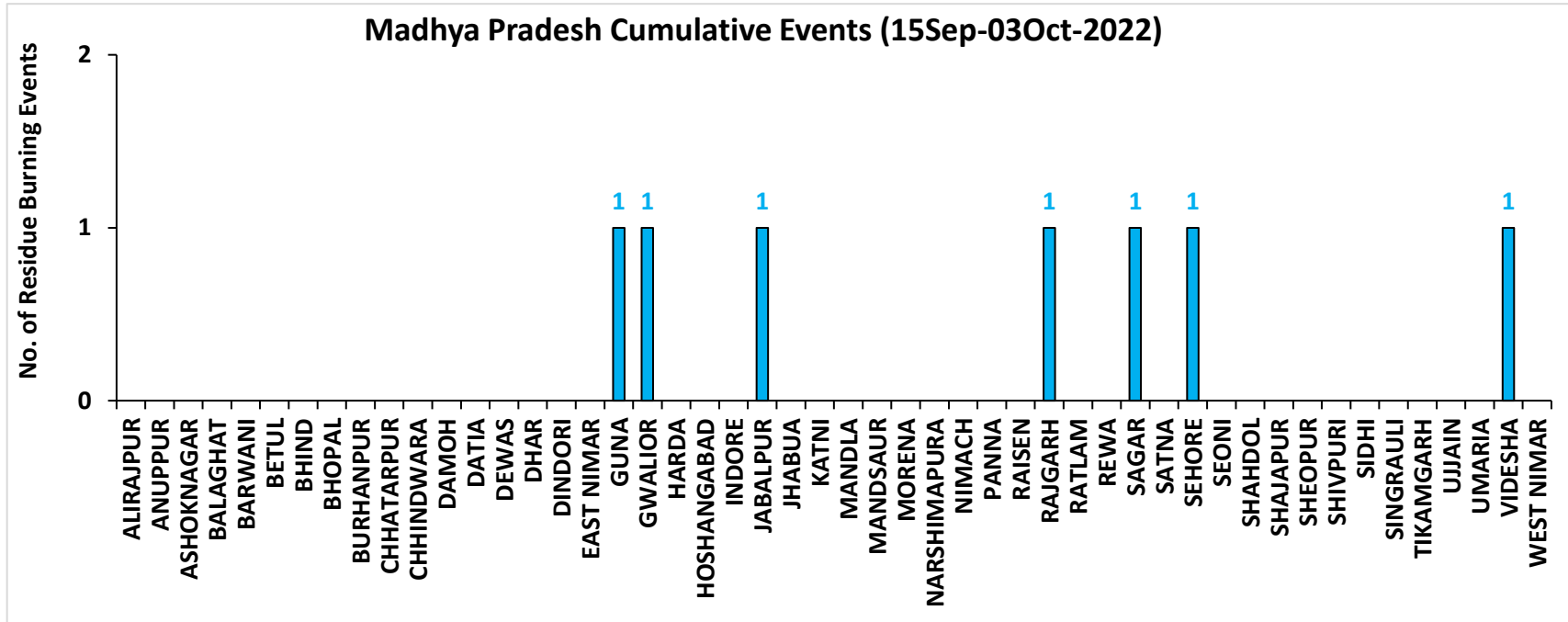
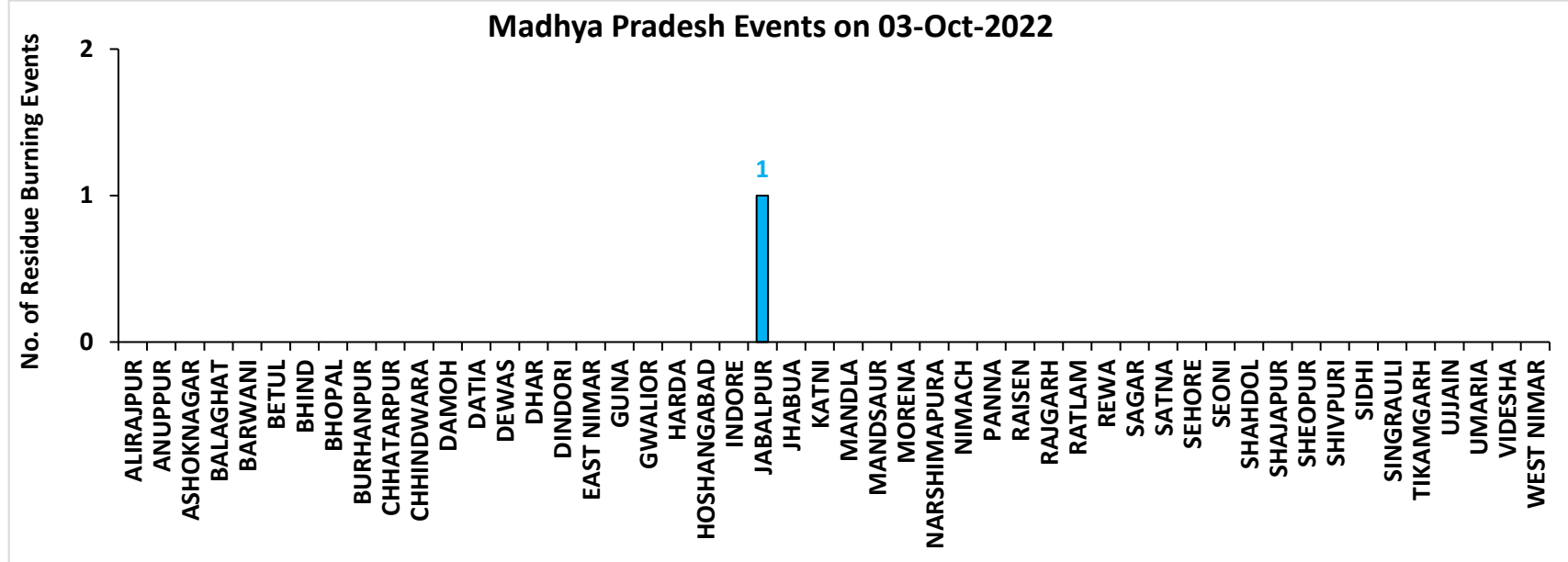
Fire Intensity (W/m²)

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



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

District-wise cumulative number of residues burning events in Madhya Pradesh (15Sep- 03Oct -2022)



District-wise cumulative number of residues burning events detected in 2020 ,2021 and 2022
(Period: 15 September-03 October)

(a) Punjab

District	15 Sep-03 Oct 2022		
	2020	2021	2022
Amritsar	946	158	284
Barnala	2	0	0
Bathinda	0	0	0
Faridkot	3	9	0
Fatehgarh Sahib	14	0	1
Fazilka	0	1	0
Firozpur	16	3	5
Gurdaspur	48	4	5
Hoshiarpur	3	0	0
Jalandhar	12	2	3
Kapurthala	12	2	3
Ludhiana	32	11	1
Mansa	1	0	0
Moga	9	0	0
Muktsar	1	1	1
Pathankot	0	0	0
Patiala	49	11	6
Rupnagar	1	0	0
Sangrur	15	3	0
SAS NAGAR (Mohali)	7	0	1
SBS Nagar	2	1	1
Tarn Taran	268	31	39
Total	1441	237	350

(b) Haryana

District	15 Sep-03 Oct 2022		
	2020	2021	2022
AMBALA	17	0	3
BHIWANI	0	0	0
CHARKHI DADRI	0	0	0
FARIDABAD	0	0	0
FATEHABAD	13	1	1
GURGAON	0	0	0
HISAR	3	0	0
JHAJJAR	0	0	0
JIND	0	0	1
KAITHAL	17	2	1
KARNAL	36	4	6
KURUKSHETRA	28	11	4
MAHENDRAGARH	0	0	0
MEWAT	0	0	0
PALWAL	1	0	0
PANCHKULA	0	0	0
PANIPAT	6	0	0
REWARI	0	0	0
ROHTAK	0	0	0
SIRSA	1	0	0
SONIPAT	2	0	0
YAMUNANAGAR	7	1	1
Total	131	19	17

(c) Uttar Pradesh

District	15 Sep-03 Oct 2022										
	2020	2021	2022	GAUTAMBUDHNAGAR	1	0	0	MUZAFARNAGAR	0	0	0
AGRA	0	0	0	GAZIPUR	0	0	0	PILHIBHIT	2	1	2
ALIGARH	4	0	1	GHAZIABAD	1	0	1	PRATAPGARH	0	0	0
ALLAHABAD	0	0	0	GONDA	0	0	0	RAIBEARELI	1	0	0
AMBEDKARNAGAR	0	0	0	GORAKHPUR	0	0	0	RAMPUR	2	3	0
AMETHI	0	0	0	HAMIRPUR	0	0	0	SAMBHAL	5	0	4
AMROHA	0	0	0	HAPUR	2	0	0	SANTKABIRNAGAR	0	0	0
AURAIYA	10	0	4	HARDOI	0	0	0	SANTRAVIDASNAGAR	0	0	0
AZAMGARH	0	0	0	HATHRAS	0	0	0	SHAHJAHANPUR	5	37	51
BADAUN	0	0	0	JALAUN	0	0	0	SHAMLI	7	2	2
BAGHPAT	1	0	0	JAUNPUR	0	0	0	SHARANPUR	3	0	0
BAHRAICH	0	0	0	JHANSI	2	0	0	SHRAWASTI	0	0	0
BALLIA	0	0	0	KANNAUJ	1	0	0	SIDDHARTHANAGAR	0	0	0
BALRAMPUR	0	0	0	KANPUR	0	1	0	SITAPUR	1	0	0
BANDA	0	0	0	KANPUR DEHAT	1	0	0	SONBHADRA	0	0	0
BARABANKI	1	0	0	KASGANJ	0	0	0	SULTANPUR	0	0	0
BAREILLY	0	0	0	KAUSHAMBI	1	0	0	UNNAO	2	0	0
BASTI	0	0	0	KHERI	1	3	8	VARANASI	0	0	0
BIJNOR	1	0	1	KUSHINAGAR	0	0	0	Total	67	49	78
BULANDSAHAR	1	0	2	LALITPUR	0	1	2				
CHANDAULI	0	0	0	LUCKNOW	0	0	0				
CHITRAKOOT	0	0	0	MAHARAJGANJ	0	0	0				
DEORIA	0	0	0	MAHOBA	0	0	0				
ETAH	2	0	0	MAINPURI	0	0	0				
ETAWAH	0	0	0	MATHURA	2	1	0				
FAIZABAD	0	0	0	MAU	0	0	0				
FARRUKHABAD	0	0	0	MEERUT	6	0	0				
FATEHPUR	1	0	0	MIRZAPUR	0	0	0				
FIROZABAD	0	0	0	MORADABAD	0	0	0				

(d) Delhi

District	15 Sep-03 Oct 2022		
	2020	2021	2022
CENTRAL	0	0	0
EAST	0	0	0
NEW DELHI	0	0	0
NORTH	1	0	0
NORTH EAST	0	0	0
NORTH WEST DELHI	0	0	0
SHAHADRA	0	0	0
SOUTH	1	0	0
SOUTH EAST	0	0	0
SOUTH WEST DELHI	0	0	0
WEST DELHI	0	0	0
Total	2	0	0

(e) Rajasthan

District	15 Sep-03 Oct 2022		
	2020	2021	2022
AJMER	0	0	0
ALWAR	1	0	0
BANSWARA	0	0	0
BARAN	11	0	3
BARMER	2	0	0
BHARATPUR	0	0	0
BHILWARA	1	0	0
BIKANER	0	0	0
BUNDI	1	0	2
CHITTAURGARH	0	1	0
CHURU	0	0	0
DAUSA	0	0	0
DHOLPUR	0	0	0
DUNGARPUR	0	0	0
GANGANAGAR	1	0	0
HANUMANGARH	6	0	1
JAIPUR	0	0	0
JAISELMER	1	0	0
JALOR	0	0	0
JHALAWAR	0	0	0
JHUNJHUNUN	0	0	0
JODHPUR	1	0	0
KARALI	1	0	0
KOTA	1	0	1
NAGPUR	0	0	0
PALI	1	0	0
PRATAPGARH	0	0	0
RAJSMAND	0	0	0
SIKAR	0	0	0
SIROHI	0	0	0
SWAIMADHOPUR	0	0	0
TONK	1	0	0
UDAIPUR	0	0	0
Total	29	1	7

(f) Madhya Pradesh

District	15 Sep-03 Oct 2022						
	2020	2021	2022	PANNA	0	0	0
ALIRAJPUR	0	0	0	RAISEN	0	0	0
ANUPPUR	0	0	0	RAJGARH	1	0	2
ASHOKNAGAR	5	0	0	RATLAM	0	0	0
BALAGHAT	0	0	0	REWA	0	0	0
BARWANI	0	0	0	SAGAR	2	2	1
BETUL	0	0	0	SATNA	1	0	0
BHIND	0	0	0	SEHORE	1	0	1
BHOPAL	1	0	0	SEONI	0	0	0
BURHANPUR	0	0	0	SHAHDOL	0	0	0
CHHATARPUR	1	0	0	SHAJAPUR	2	0	0
CHHINDWARA	0	0	0	SHEOPUR	0	0	0
DAMOH	5	0	0	SHIVPURI	0	0	0
DATIA	1	0	0	SIDHI	0	0	0
DEWAS	0	0	0	SINGRAULI	0	0	0
DHAR	3	0	0	TIKAMGARH	0	0	0
DINDORI	0	0	0	UJJAIN	3	0	0
EAST NIMAR	0	0	0	UMARIA	0	0	0
GUNA	5	1	1	VIDESHA	5	1	1
GWALIOR	3	0	1	WEST NIMAR	0	0	0
HARDA	2	2	0	Total	43	6	7
HOSHANGABAD	0	0	0				
INDORE	1	0	0				
JABALPUR	1	0	0				
JHABUA	0	0	0				
KATNI	0	0	0				
MANDLA	0	0	0				
MANDSAUR	0	0	0				
MORENA	0	0	0				
NARSHIMAPURA	0	0	0				
NIMACH	0	0	0				

State-wise and date-wise number of paddy residue burning events detected in 2020, 2021 and 2022
(Period: 15 September- 03 October 2022)

Number of Paddy Residue Burning Events Detected																		
	Punjab			Haryana			Uttar Pradesh			Delhi			Rajasthan			Madhya Pradesh		
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
15-Sep	5	0	14	2	0	0	1	0	0	0	0	0	1	0	0	2	0	0
16-Sep	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17-Sep	5	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Sep	17	9	7	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
19-Sep	30	5	18	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
20-Sep	67	8	10	6	0	0	2	0	0	0	0	0	0	0	0	0	0	0
21-Sep	54	0	56	2	0	0	1	0	0	0	0	0	1	0	1	2	0	0
22-Sep	34	0	30	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
23-Sep	49	0	3	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
24-Sep	78	5	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
25-Sep	184	11	0	11	0	0	5	0	0	0	0	0	1	0	0	0	0	0
26-Sep	190	19	0	5	0	0	8	0	0	0	0	0	1	0	0	2	0	0
27-Sep	78	37	0	8	0	0	4	1	0	0	0	0	0	0	0	1	0	0
28-Sep	55	28	0	6	1	0	1	6	0	0	0	0	0	0	0	1	1	0
29-Sep	63	64	0	9	4	0	6	10	0	0	0	0	3	0	0	0	4	0
30-Sep	116	27	8	22	2	0	13	13	10	1	0	0	1	0	0	5	0	0
01-Oct	165	13	45	15	4	1	7	13	3	0	0	0	4	1	1	13	0	1
02-Oct	141	0	83	30	2	7	12	0	36	1	0	0	7	0	3	12	0	1
03-Oct	110	9	75	8	6	8	4	3	29	0	0	0	9	0	2	5	1	5
Total	1441	237	350	131	19	17	67	49	78	2	0	0	29	1	7	43	6	7

Details of residue burning events in Punjab on 03-Oct-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMRITSAR	ATTARI	S-NPP	31.55250	74.84040	13:04:23	D	3.40
2	AMRITSAR	CHOGAWAN	S-NPP	31.74150	74.65430	13:04:23	D	3.00
3	AMRITSAR	HARSHA CHHINA	S-NPP	31.77100	74.89820	13:04:23	D	2.70
4	AMRITSAR	HARSHA CHHINA	S-NPP	31.77330	74.89640	13:04:23	D	3.70
5	AMRITSAR	HARSHA CHHINA	S-NPP	31.79690	74.87720	13:04:23	D	3.10
6	AMRITSAR	HARSHA CHHINA	S-NPP	31.79780	74.88150	13:04:23	D	7.50
7	AMRITSAR	HARSHA CHHINA	S-NPP	31.80100	74.87600	13:04:23	D	3.10
8	AMRITSAR	JANDIALA GURU	S-NPP	31.58880	75.09640	13:04:23	D	7.70
9	AMRITSAR	JANDIALA GURU	S-NPP	31.59030	75.09490	13:04:23	D	7.70
10	AMRITSAR	JANDIALA GURU	AQUA	31.52000	75.05900	13:49:37	D	6.00
11	AMRITSAR	JANDIALA GURU	AQUA	31.53700	75.12100	13:49:37	D	9.70
12	AMRITSAR	JANDIALA GURU	AQUA	31.59600	75.07000	13:49:37	D	6.40
13	AMRITSAR	JANDIALA GURU	AQUA	31.62600	75.02100	13:49:37	D	5.60
14	AMRITSAR	JANDIALA GURU	AQUA	31.65100	75.00600	13:49:37	D	12.60
15	AMRITSAR	JANDIALA GURU	AQUA	31.68000	75.01600	13:49:37	D	20.30
16	AMRITSAR	MAJITHA	S-NPP	31.67260	75.02320	13:04:23	D	3.60
17	AMRITSAR	MAJITHA	S-NPP	31.71650	75.04010	13:04:23	D	2.80
18	AMRITSAR	MAJITHA	S-NPP	31.72920	75.01840	13:04:23	D	3.80
19	AMRITSAR	MAJITHA	S-NPP	31.74800	74.96310	13:04:23	D	2.10
20	AMRITSAR	MAJITHA	S-NPP	31.76960	75.04790	13:04:23	D	3.90
21	AMRITSAR	MAJITHA	S-NPP	31.79080	74.99320	13:04:23	D	6.40
22	AMRITSAR	MAJITHA	S-NPP	31.80480	74.99840	13:04:23	D	1.70
23	AMRITSAR	MAJITHA	AQUA	31.68100	75.02700	13:49:37	D	12.80
24	AMRITSAR	MAJITHA	AQUA	31.75700	75.04500	13:49:37	D	6.50
25	AMRITSAR	RAYYA	S-NPP	31.53500	75.15980	13:04:23	D	8.50
26	AMRITSAR	RAYYA	S-NPP	31.62720	75.22000	13:04:23	D	4.70
27	AMRITSAR	RAYYA	S-NPP	31.65970	75.29490	13:04:23	D	2.90
28	AMRITSAR	RAYYA	AQUA	31.56000	75.14900	13:49:37	D	5.30
29	AMRITSAR	RAYYA	AQUA	31.63700	75.23600	13:49:37	D	9.80
30	AMRITSAR	RAYYA	AQUA	31.63800	75.24700	13:49:37	D	5.10

31	AMRITSAR	RAYYA	AQUA	31.64600	75.23500	13:49:37	D	4.90
32	AMRITSAR	TARSIKKA	S-NPP	31.60170	75.17270	13:04:23	D	2.40
33	AMRITSAR	TARSIKKA	S-NPP	31.60470	75.17280	13:04:23	D	5.50
34	AMRITSAR	TARSIKKA	S-NPP	31.60580	75.17150	13:04:23	D	3.30
35	AMRITSAR	TARSIKKA	S-NPP	31.60980	75.13560	13:04:23	D	7.20
36	AMRITSAR	TARSIKKA	S-NPP	31.61910	75.15980	13:04:23	D	7.70
37	AMRITSAR	TARSIKKA	S-NPP	31.62000	75.16410	13:04:23	D	4.30
38	AMRITSAR	TARSIKKA	S-NPP	31.63150	75.11610	13:04:23	D	5.50
39	AMRITSAR	TARSIKKA	S-NPP	31.67350	75.02750	13:04:23	D	3.60
40	AMRITSAR	TARSIKKA	S-NPP	31.68940	75.06380	13:04:23	D	5.10
41	AMRITSAR	TARSIKKA	S-NPP	31.71470	75.13510	13:04:23	D	2.10
42	AMRITSAR	TARSIKKA	AQUA	31.57600	75.13500	13:49:37	D	8.00
43	AMRITSAR	TARSIKKA	AQUA	31.60100	75.11300	13:49:37	D	25.70
44	AMRITSAR	TARSIKKA	AQUA	31.60300	75.18800	13:49:37	D	4.60
45	AMRITSAR	TARSIKKA	AQUA	31.60400	75.19900	13:49:37	D	7.60
46	AMRITSAR	TARSIKKA	AQUA	31.61600	75.15300	13:49:37	D	4.90
47	AMRITSAR	TARSIKKA	AQUA	31.64200	75.13800	13:49:37	D	5.70
48	AMRITSAR	TARSIKKA	AQUA	31.67300	75.16400	13:49:37	D	9.00
49	AMRITSAR	VERKA	S-NPP	31.66580	74.79670	13:04:23	D	1.60
50	AMRITSAR	VERKA	S-NPP	31.72640	74.90030	13:04:23	D	2.90
51	AMRITSAR	VERKA	S-NPP	31.74330	74.87710	13:04:23	D	7.00
52	AMRITSAR	VERKA	AQUA	31.70700	74.94600	13:49:37	D	6.00
53	AMRITSAR	VERKA	AQUA	31.71000	74.96700	13:49:37	D	5.50
54	AMRITSAR	VERKA	AQUA	31.72900	74.90900	13:49:37	D	11.40
55	FIROZPUR	ZIRA	S-NPP	31.02680	74.99310	13:04:23	D	3.10
56	FIROZPUR	ZIRA	S-NPP	31.04080	74.89170	13:04:23	D	7.90
57	GURDASPUR	FATEHGARH CHURIAN	S-NPP	31.80960	75.13990	13:04:23	D	3.80
58	GURDASPUR	FATEHGARH CHURIAN	S-NPP	31.86060	75.01890	13:04:23	D	13.40
59	JALANDHAR	JALANDHAR WEST	S-NPP	31.49930	75.54160	13:04:23	D	5.60
60	KAPURTHALA	SULTANPUR LODHI	AQUA	31.25800	75.15900	13:49:37	D	11.40
61	LUDHIANA	MACHHIWARA	S-NPP	30.84060	76.26660	13:04:23	D	4.40
62	PATIALA	NABHA	S-NPP	30.37510	76.12850	13:04:23	D	2.70
63	PATIALA	SAMANA	S-NPP	30.17010	76.11790	13:04:23	D	3.20
64	TARN TARAN	KHADUR SAHIB	S-NPP	31.47600	75.17550	13:04:23	D	9.10

65	TARN TARAN	KHADUR SAHIB	S-NPP	31.51820	75.18240	13:04:23	D	3.00
66	TARN TARAN	KHADUR SAHIB	AQUA	31.42500	75.16900	13:49:37	D	8.60
67	TARN TARAN	KHADUR SAHIB	AQUA	31.48000	75.23500	13:49:37	D	5.90
68	TARN TARAN	NAUSHERA PANNUAN	S-NPP	31.35070	75.01390	13:04:23	D	4.40
69	TARN TARAN	NAUSHERA PANNUAN	S-NPP	31.35150	75.01020	13:04:23	D	6.50
70	TARN TARAN	TARN TARAN	S-NPP	31.44210	74.90170	13:04:23	D	3.60
71	TARN TARAN	TARN TARAN	S-NPP	31.44260	74.90250	13:04:23	D	2.50
72	TARN TARAN	TARN TARAN	S-NPP	31.49960	74.98820	13:04:23	D	2.50
73	TARN TARAN	TARN TARAN	AQUA	31.42900	74.80200	13:49:37	D	10.40
74	TARN TARAN	TARN TARAN	AQUA	31.47500	74.99800	13:49:37	D	5.90
75	TARN TARAN	TARN TARAN	AQUA	31.51400	75.01700	13:49:37	D	6.50

Details of residue burning events in Haryana on 03-Oct-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	AMBALA	NARAINGARH	AQUA	30.48900	76.93300	13:49:37	D	13.20
2	AMBALA	SHAHZADPUR	AQUA	30.40500	77.14300	13:49:37	D	6.90
3	KARNAL	GHARAUNDA	AQUA	29.52100	77.02300	13:49:37	D	14.10
4	KARNAL	GHARAUNDA	AQUA	29.52300	77.03500	13:49:37	D	8.00
5	KARNAL	NILOKHERI	AQUA	29.82600	76.76300	13:49:37	D	4.50
6	KURUKSHETRA	LADWA	S-NPP	30.02410	77.02380	13:04:23	D	2.70
7	KURUKSHETRA	THANESAR	AQUA	30.10600	76.80100	13:49:37	D	6.10
8	YAMUNANAGAR	JAGADHRI	S-NPP	30.06150	77.28030	13:04:23	D	8.70

Details of residue burning events in Uttar Pradesh on 03-Oct-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	ALIGARH	KHAIR	S-NPP	27.98140	77.64290	13:04:23	D	3.00
2	KHERI	MOHMADI	S-NPP	28.00900	80.31470	13:04:23	D	5.90
3	PILHIBHIT	PURANPUR	S-NPP	28.34950	80.19270	13:04:23	D	2.80
4	SAMBHAL	SAMBHAL	S-NPP	28.56760	78.63620	13:04:23	D	3.50
5	SHAHJAHANPUR	PUWANYA	S-NPP	28.00840	80.08090	13:04:23	D	2.70
6	SHAHJAHANPUR	PUWANYA	S-NPP	28.08950	80.21180	13:04:23	D	5.20
7	SHAHJAHANPUR	PUWANYA	S-NPP	28.09290	80.21100	13:04:23	D	5.20
8	SHAHJAHANPUR	PUWANYA	S-NPP	28.09720	80.23610	13:04:23	D	9.80
9	SHAHJAHANPUR	PUWANYA	S-NPP	28.10840	80.17740	13:04:23	D	19.00
10	SHAHJAHANPUR	PUWANYA	S-NPP	28.11470	80.19340	13:04:23	D	4.10
11	SHAHJAHANPUR	PUWANYA	S-NPP	28.11660	80.16270	13:04:23	D	12.00
12	SHAHJAHANPUR	PUWANYA	S-NPP	28.14940	80.16860	13:04:23	D	3.20
13	SHAHJAHANPUR	PUWANYA	S-NPP	28.15280	80.16790	13:04:23	D	5.20
14	SHAHJAHANPUR	PUWANYA	S-NPP	28.15510	80.22370	13:04:23	D	6.80
15	SHAHJAHANPUR	PUWANYA	S-NPP	28.15760	80.17560	13:04:23	D	2.40
16	SHAHJAHANPUR	PUWANYA	S-NPP	28.15850	80.22300	13:04:23	D	6.80
17	SHAHJAHANPUR	PUWANYA	S-NPP	28.16370	80.16990	13:04:23	D	4.00
18	SHAHJAHANPUR	PUWANYA	S-NPP	28.16430	80.15240	13:04:23	D	3.90
19	SHAHJAHANPUR	PUWANYA	S-NPP	28.16710	80.16920	13:04:23	D	5.40
20	SHAHJAHANPUR	PUWANYA	S-NPP	28.17410	80.21100	13:04:23	D	4.20
21	SHAHJAHANPUR	PUWANYA	S-NPP	28.17720	80.21110	13:04:23	D	2.80
22	SHAHJAHANPUR	PUWANYA	S-NPP	28.19340	80.18170	13:04:23	D	2.40
23	SHAHJAHANPUR	PUWANYA	S-NPP	28.19600	80.28030	13:04:23	D	3.50
24	SHAHJAHANPUR	PUWANYA	S-NPP	28.21120	80.20380	13:04:23	D	3.00
25	SHAHJAHANPUR	PUWANYA	S-NPP	28.28700	80.23500	13:04:23	D	1.30
26	SHAHJAHANPUR	PUWANYA	S-NPP	28.29110	80.23850	13:04:23	D	4.30
27	SHAHJAHANPUR	PUWANYA	S-NPP	28.29400	80.23910	13:04:23	D	6.90
28	SHAMLI	KAIRANA	S-NPP	29.36790	77.15880	13:04:23	D	3.50
29	SHAMLI	KAIRANA	S-NPP	29.37060	77.16130	13:04:23	D	5.30

Details of residue burning events in Rajasthan on 03-Oct-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	BARAN	ATRU	S-NPP	24.94990	76.49590	13:04:23	D	3.10
2	BARAN	SHAHBAD	S-NPP	25.11150	76.91860	13:04:23	D	3.10

Details of residue burning events in Madhya Pradesh on 03-Oct-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	GUNA	GUNA	S-NPP	24.94860	77.19950	13:04:23	D	2.90
2	GWALIOR	BHITARWAR	S-NPP	25.99030	78.25150	01:55:06	N	0.70
3	SAGAR	GARHAKOTA	S-NPP	23.69210	79.22260	13:04:23	D	2.40
4	SEHORE	SEHORE	S-NPP	23.32160	77.15230	13:04:23	D	1.50
5	VIDESHA	BASODA	S-NPP	23.74320	78.19430	01:55:06	N	0.60

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)

and on IARI CREAMS website (<http://creams.iari.res.in/cms2/index.php>)
