



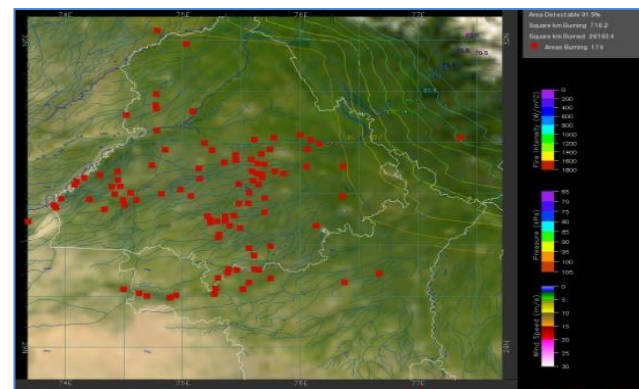
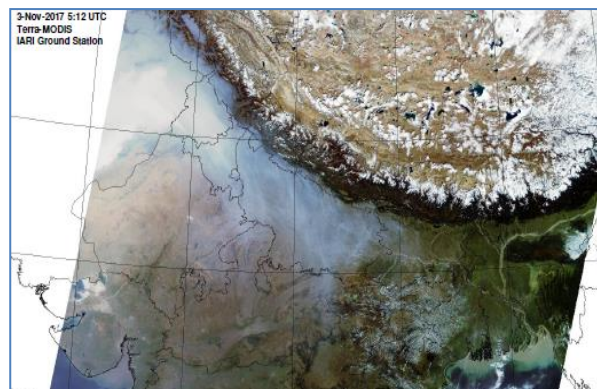
Bulletin No. 22

Events Date:
06-Oct-2022

Issued on:
06-Oct-2022



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



Prepared by:

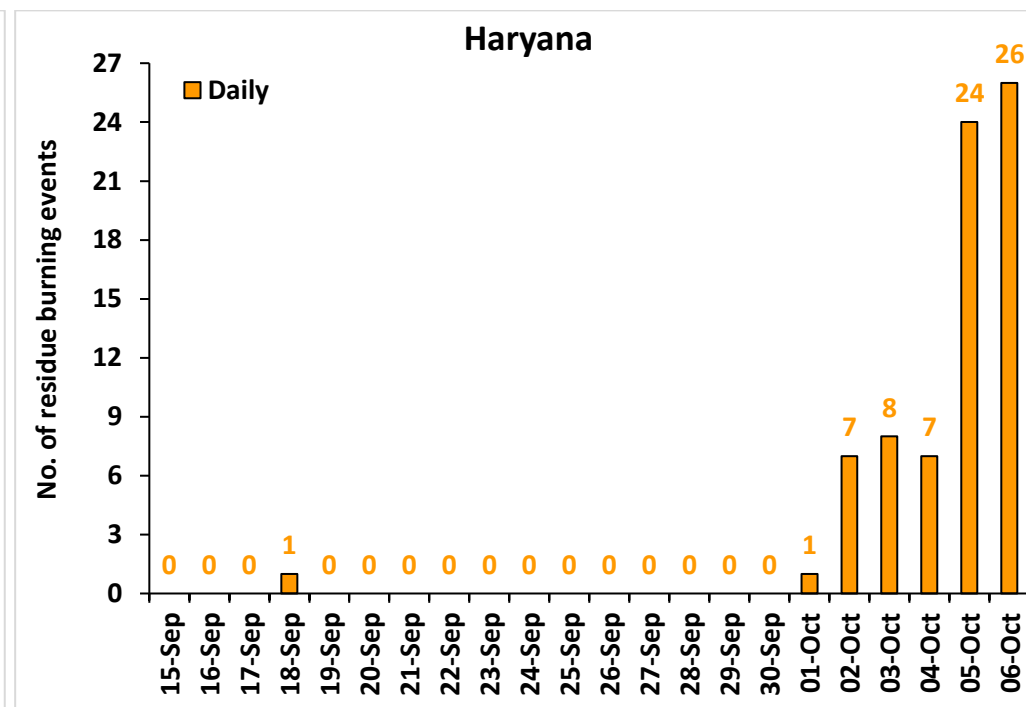
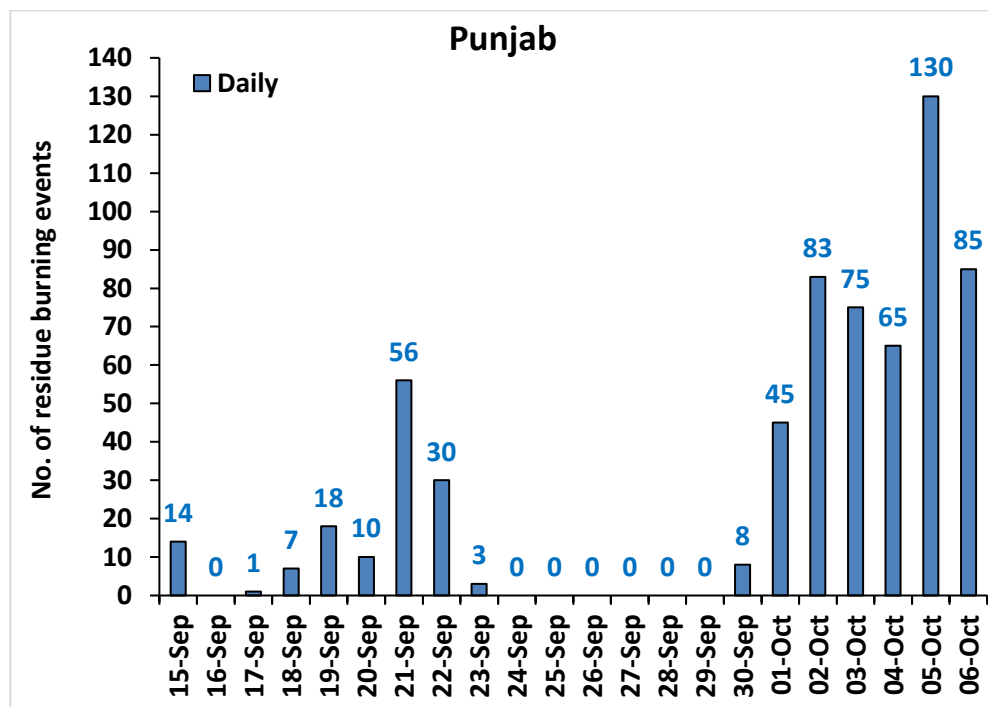
Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012

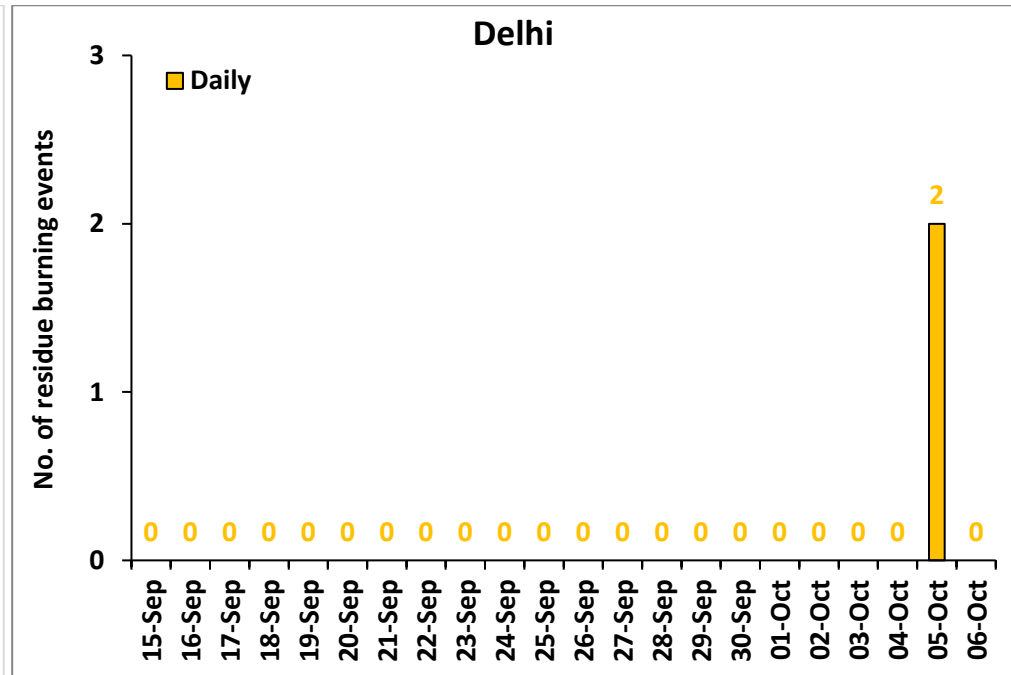
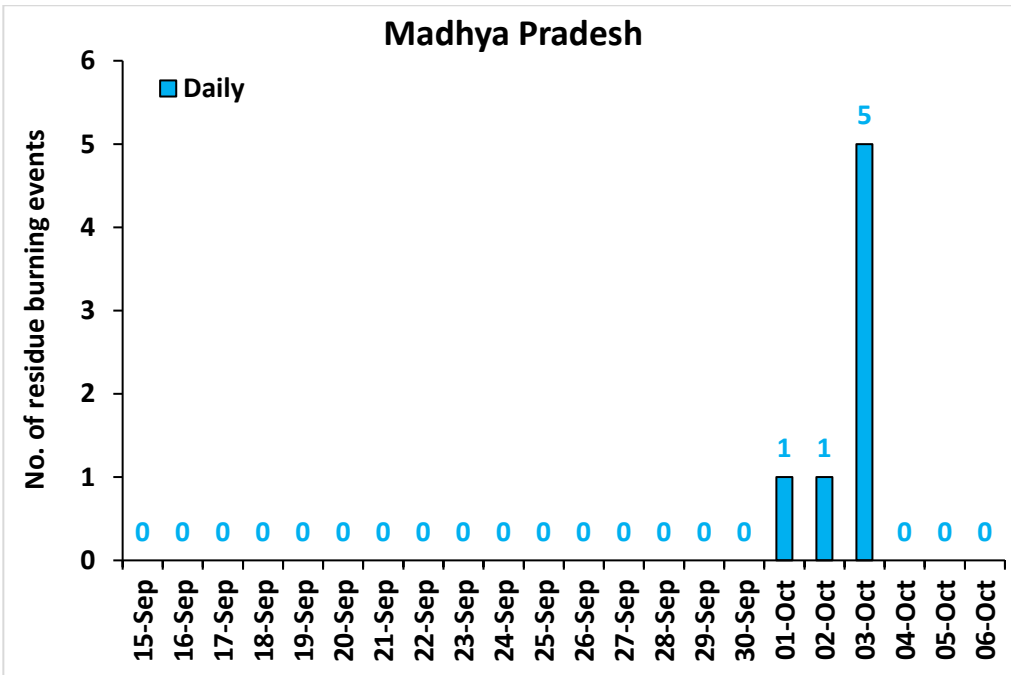
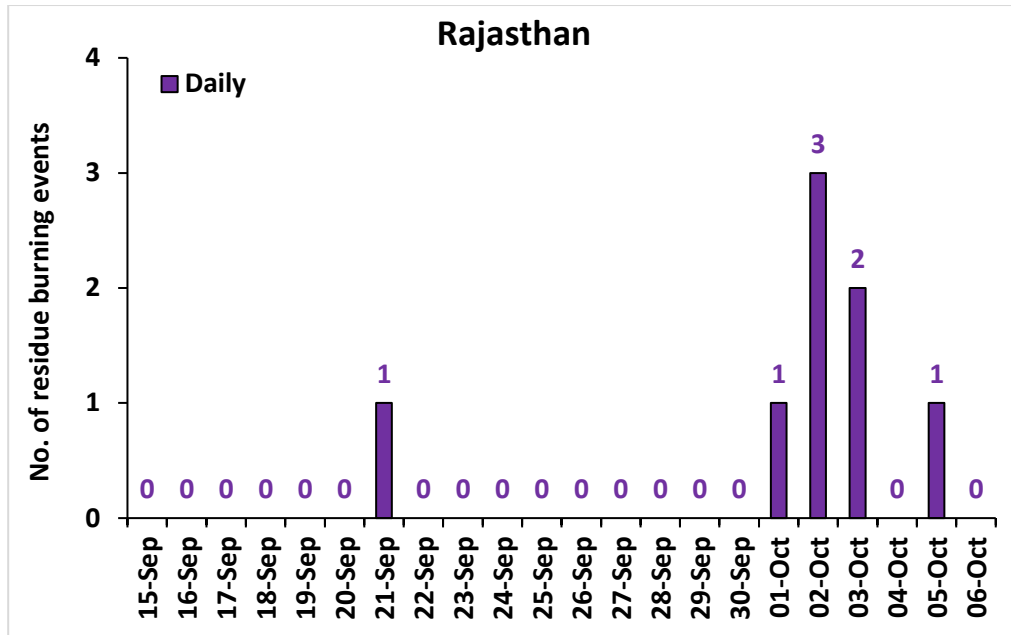
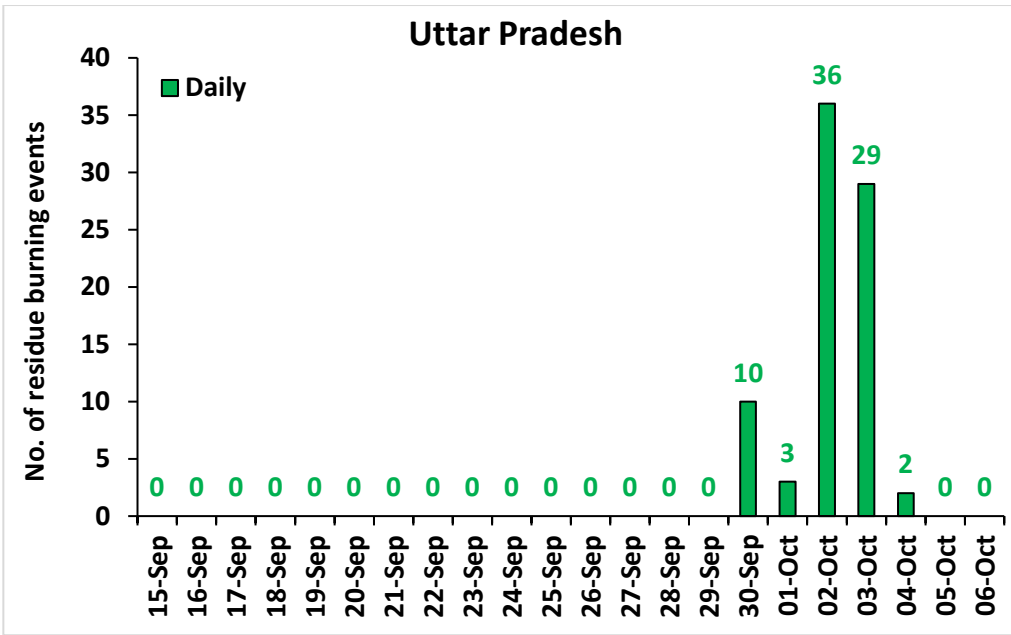
<http://creams.iari.res.in>

Highlights for 06-Oct-2022

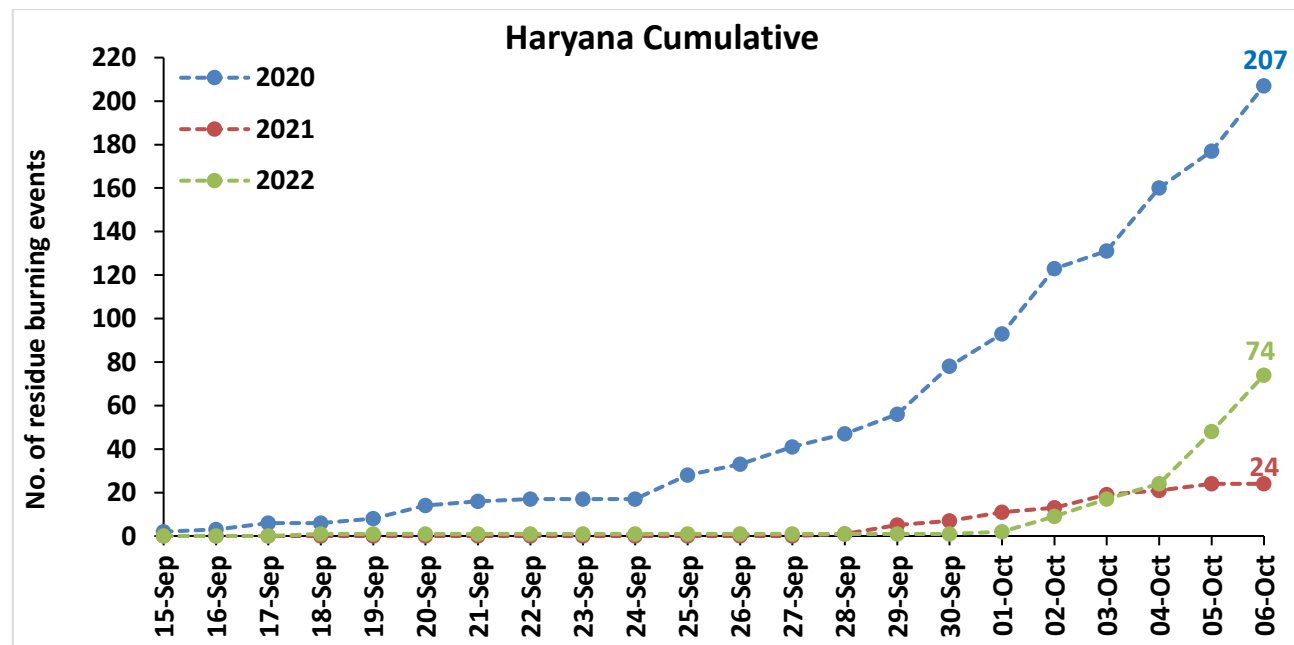
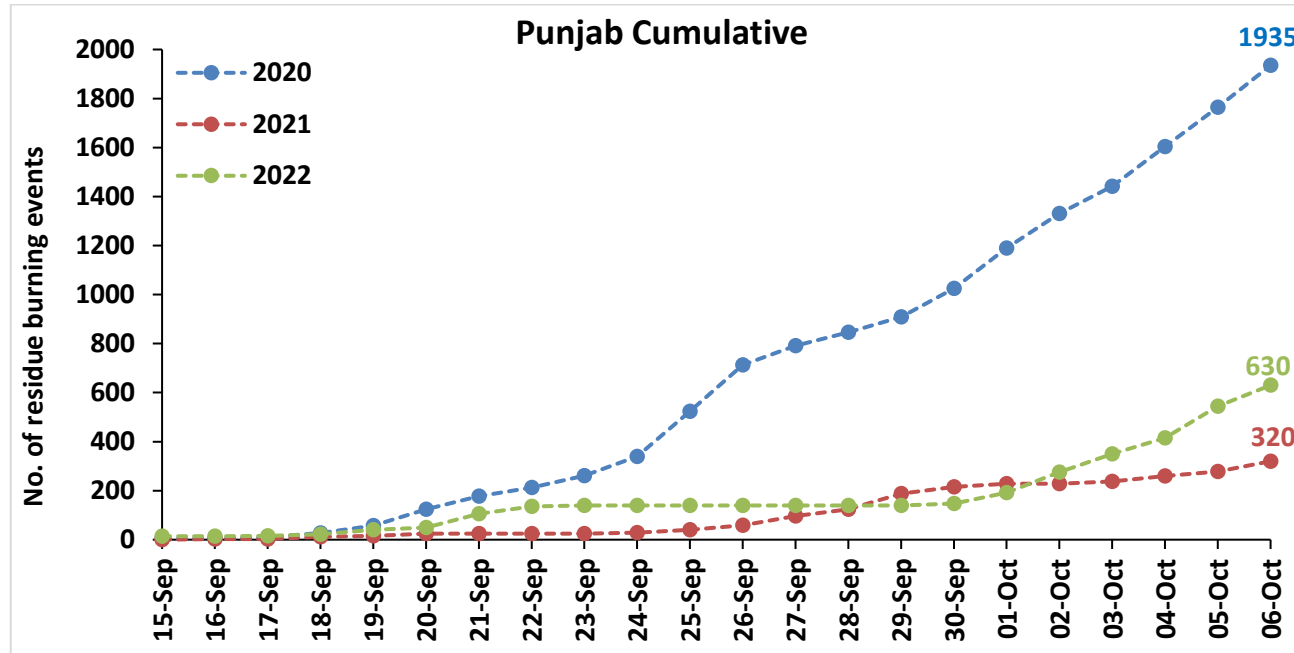
- The active fire events due to rice residue burning were monitored using satellite remote sensing, following the "Standard Protocol for Estimation of Crop Residue Burning Fire Events using Satellite Data".
- Satellites detected **111** residue burning events in the six study States on 06-Oct-2022.
- The state wise events detected on 06-Oct-2022 were **85** in Punjab, **26** in Haryana, **0** in UP, **0** in Delhi, **0** in Rajasthan and **0** in MP.
- Total **801** burning events were detected in the six states between 15-Sept-2022 and 06-Oct-2022, which are distributed as **630**, **74**, **80**, **2**, **8** and **7** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.
- Detection of residue burning events was hampered by the presence of clouds over Uttar Pradesh and Madhya Pradesh.

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

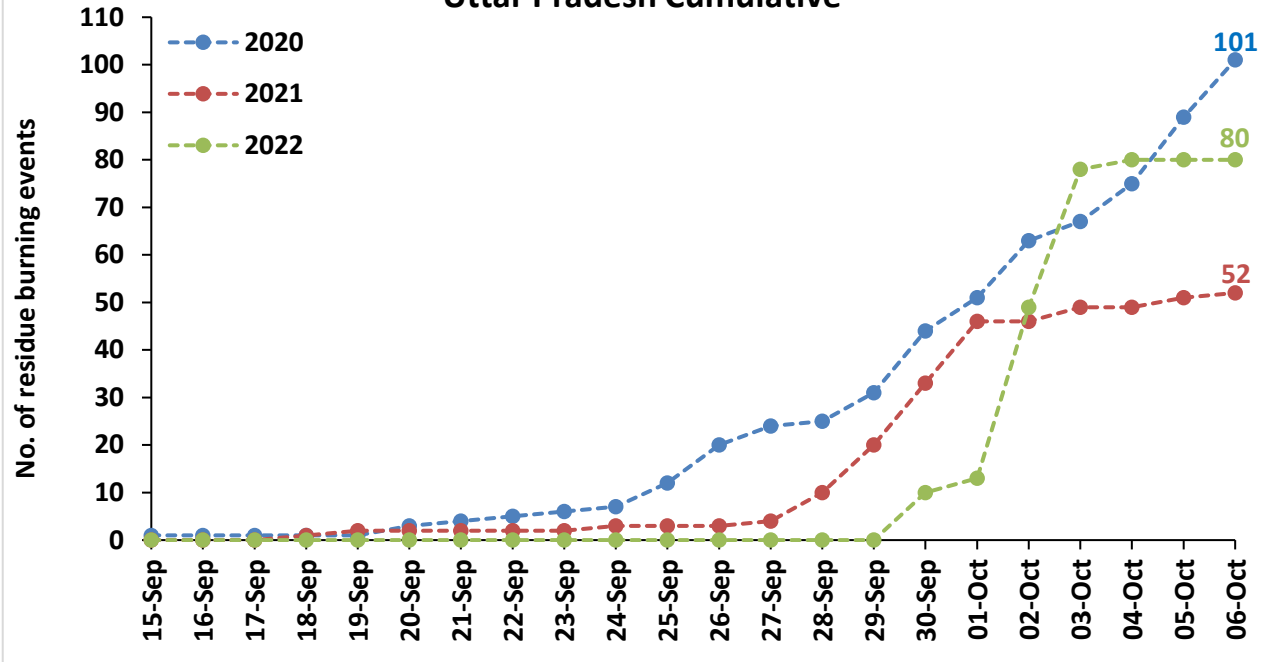




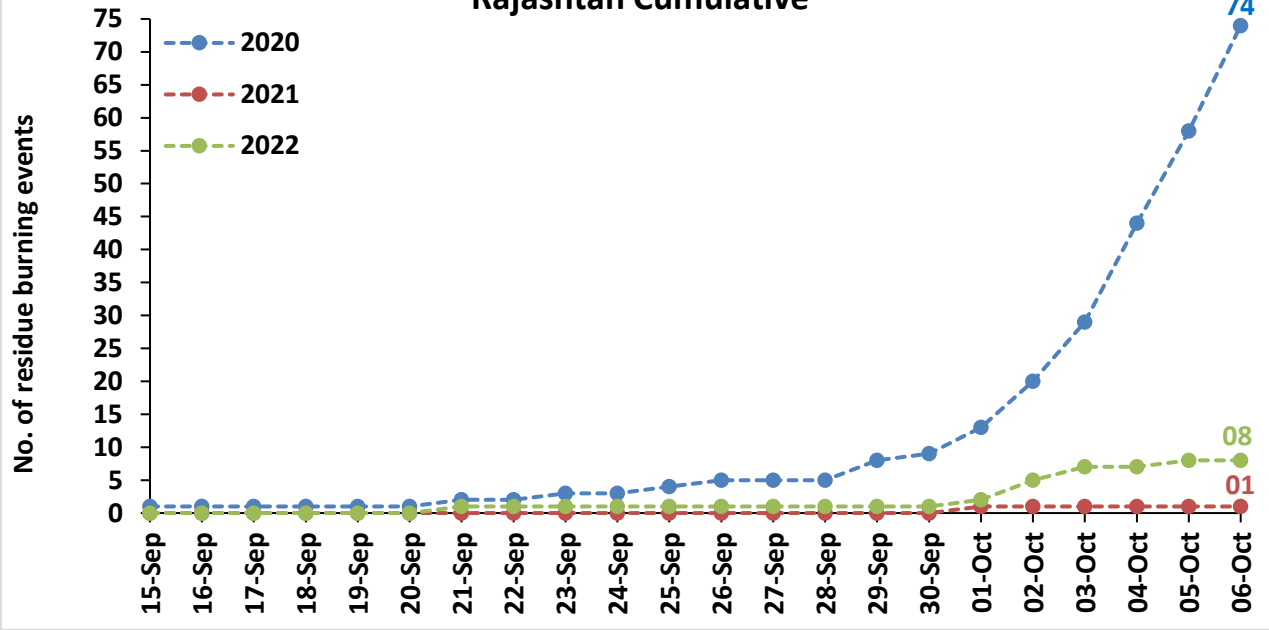
Comparison of residue burning events in current year (2022) with previous years (2020 and 2021) for the study States

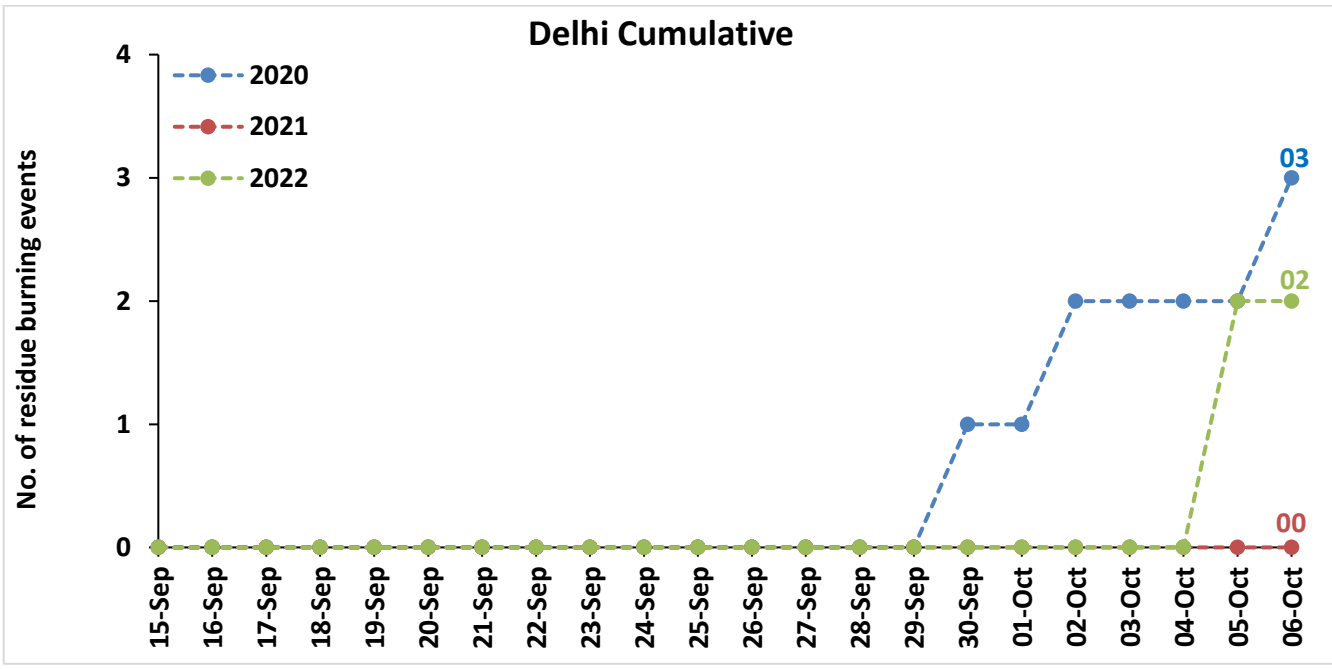
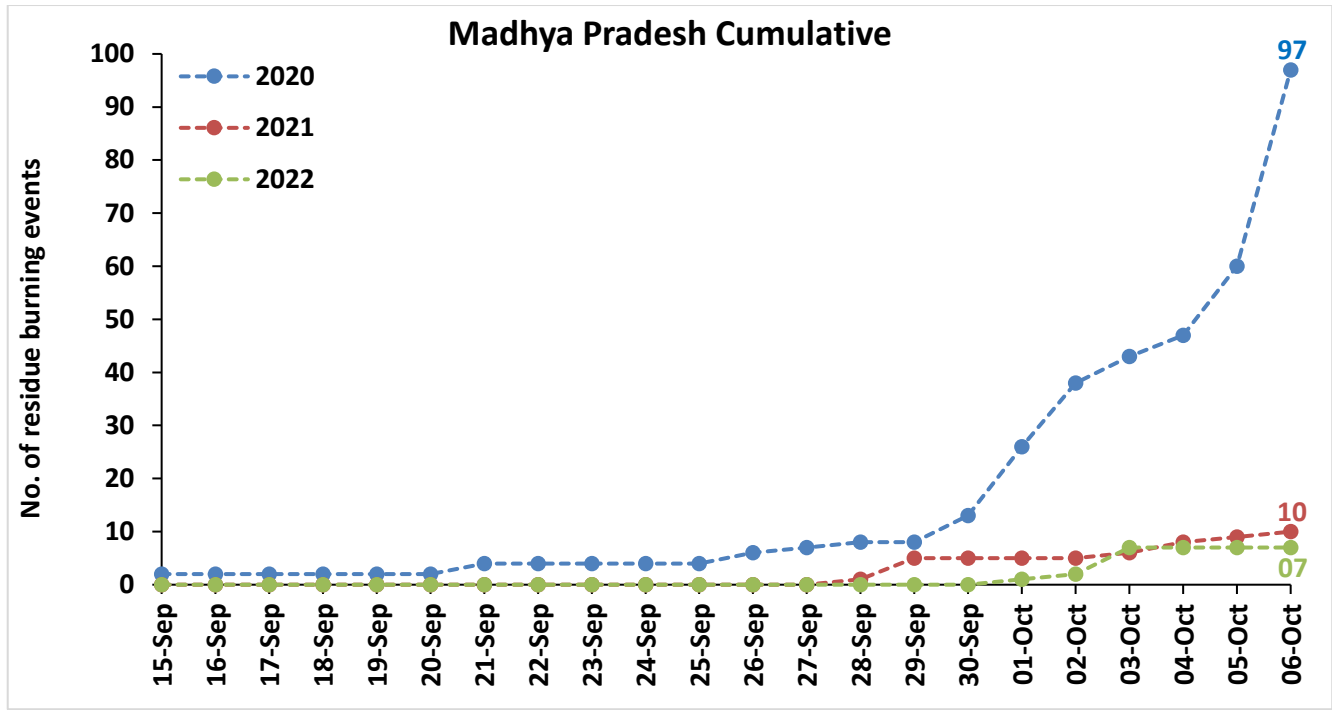


Uttar Pradesh Cumulative

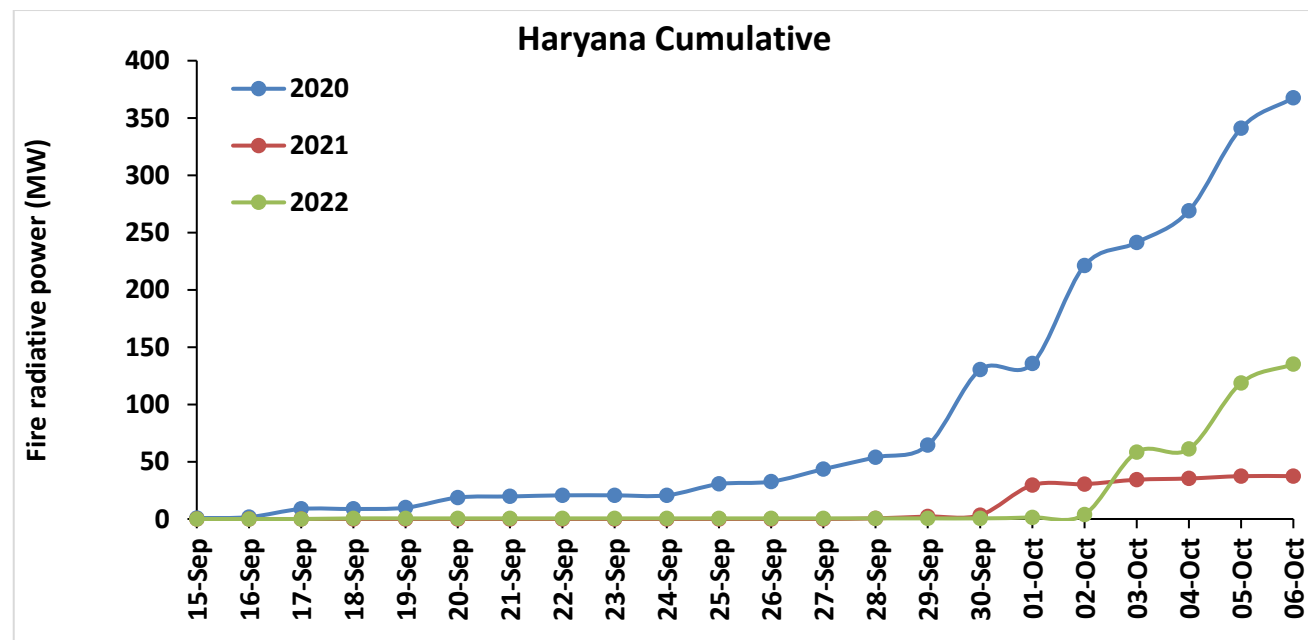
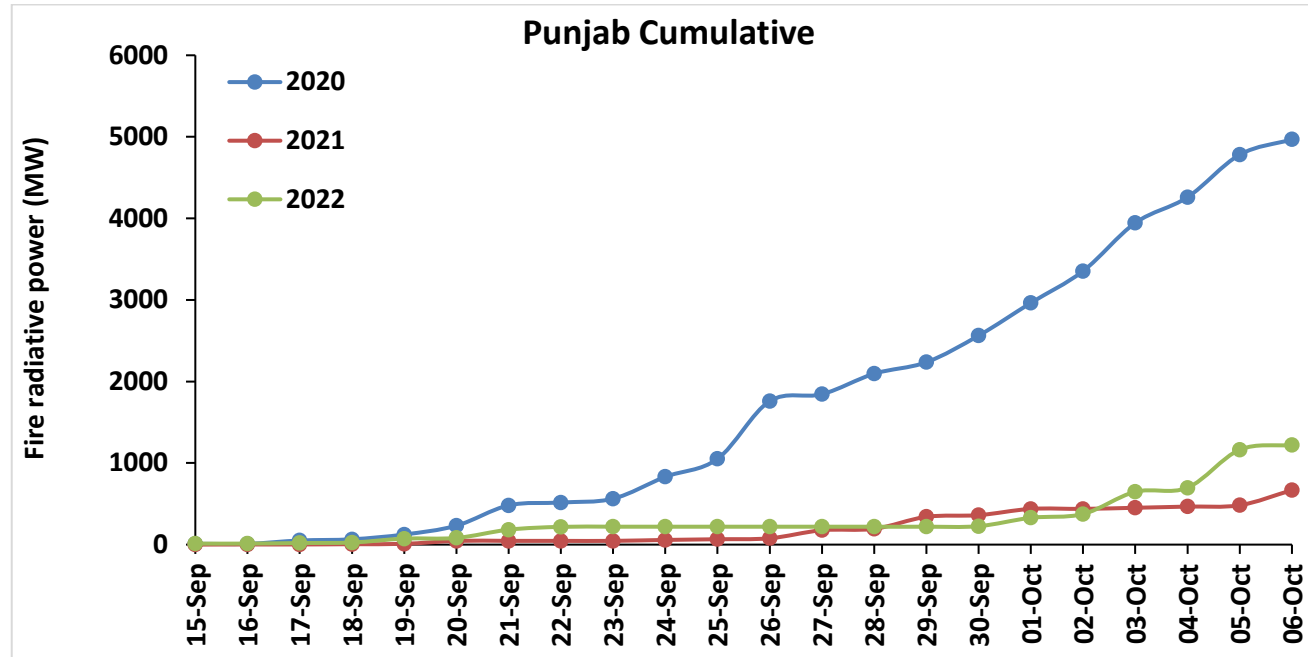


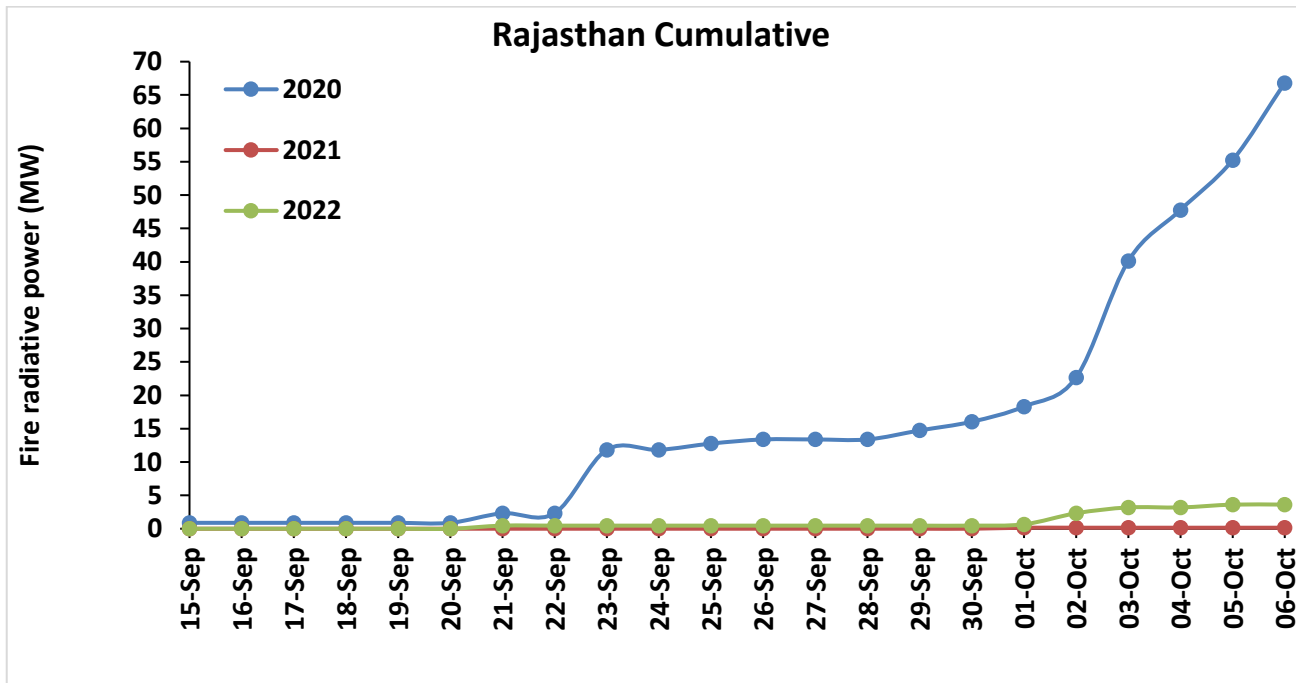
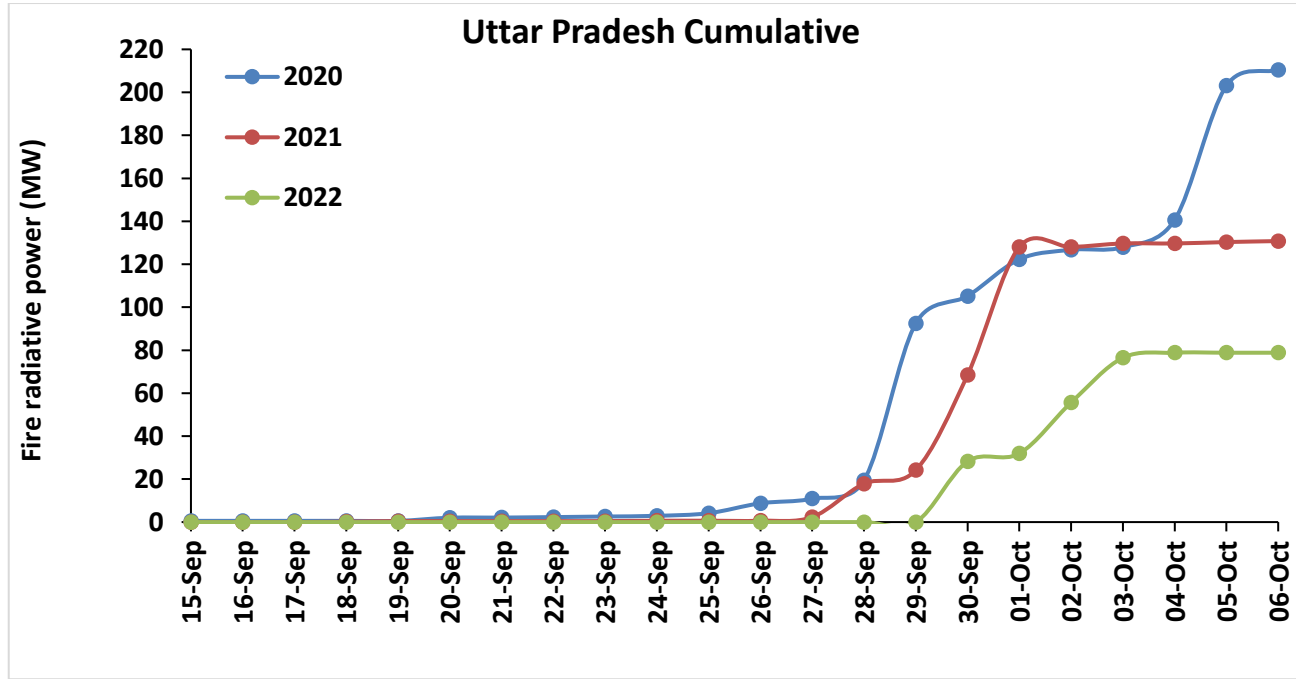
Rajasthan Cumulative

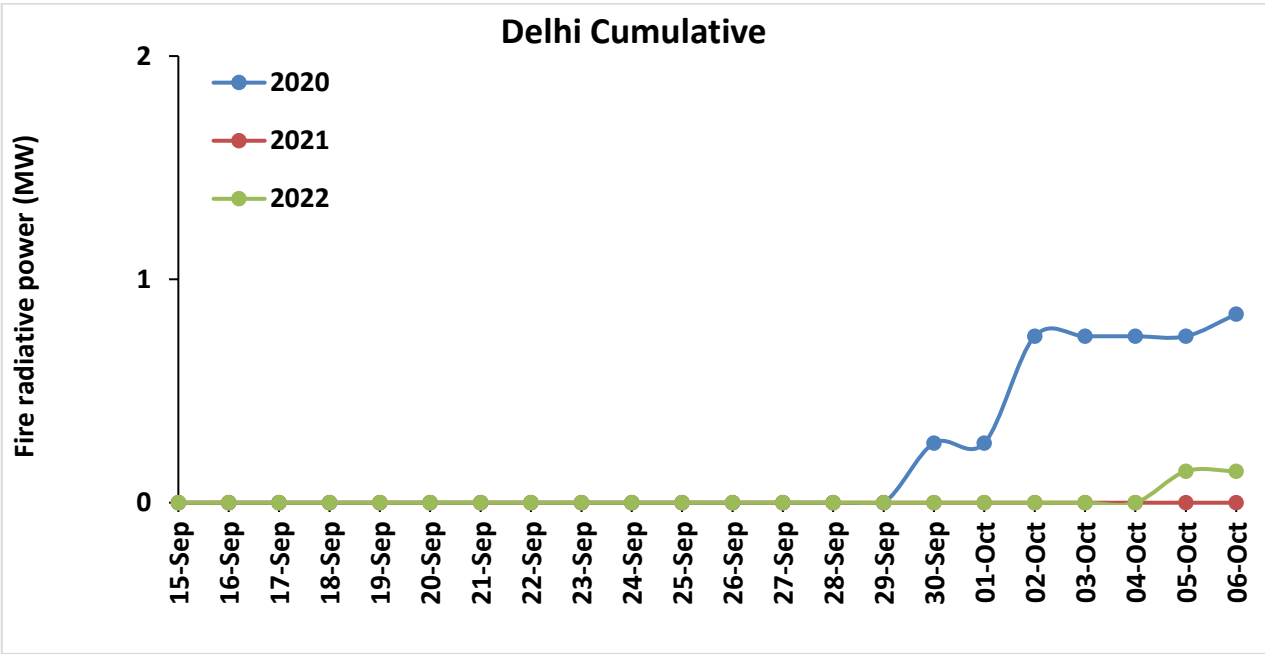
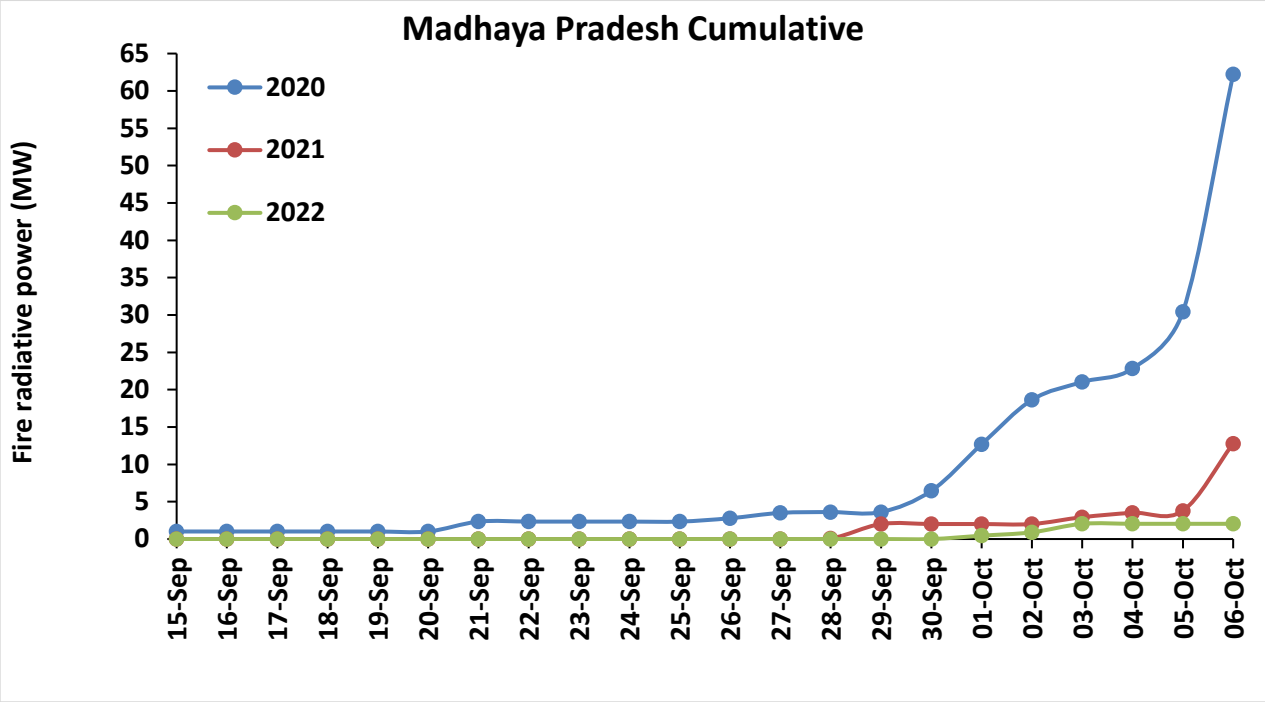




Comparison of residue burning fire power in current year (2022) with previous years (2021 and 2020) for the study States

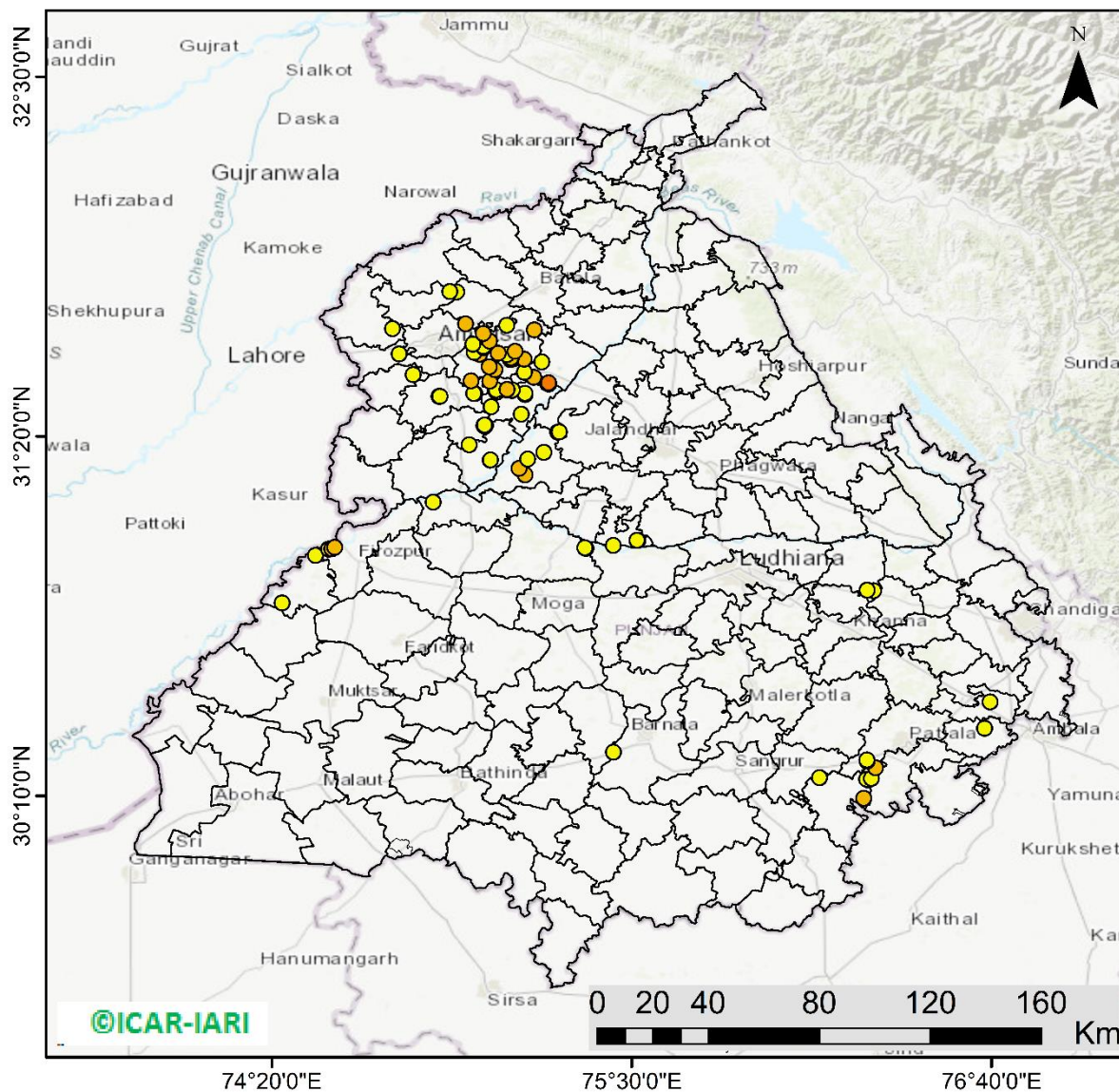






Punjab

RICE RESIDUE BURNING IN PUNJAB



85 burning events detected in Punjab during (06th Oct 2022)

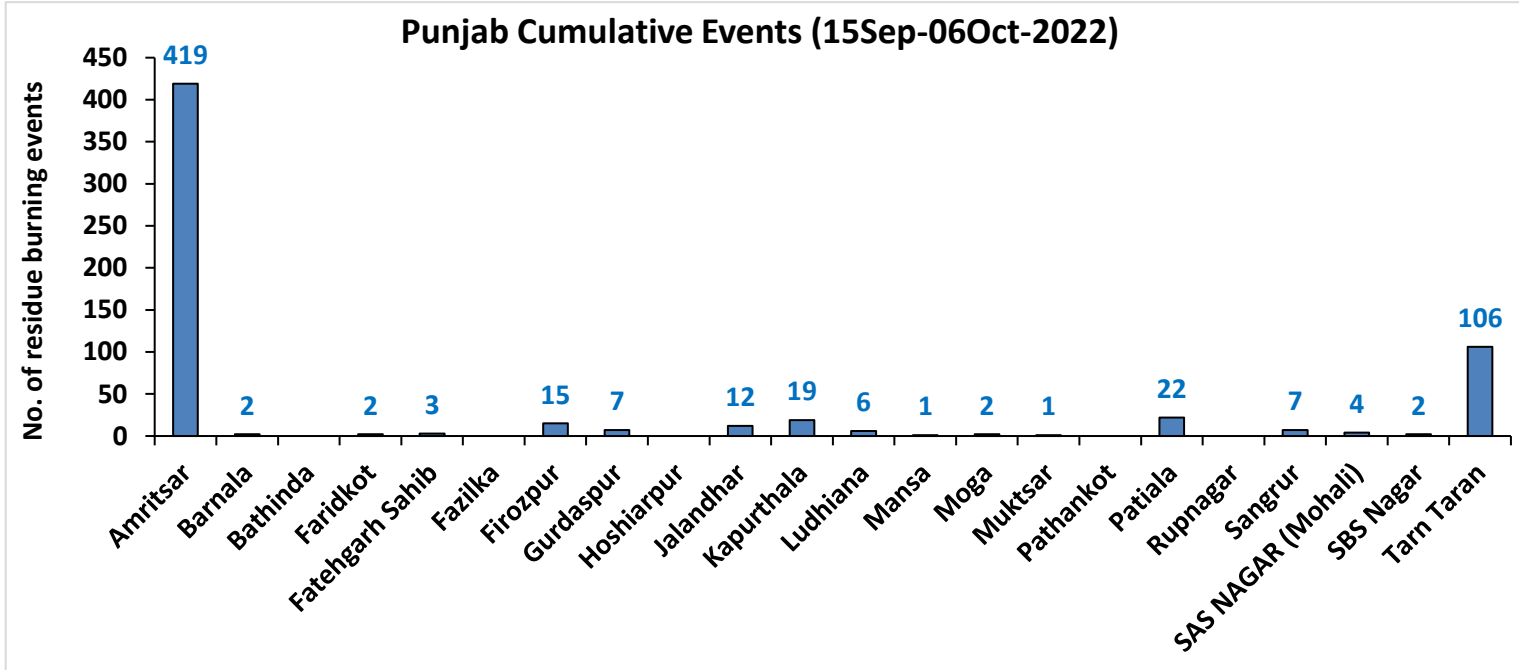
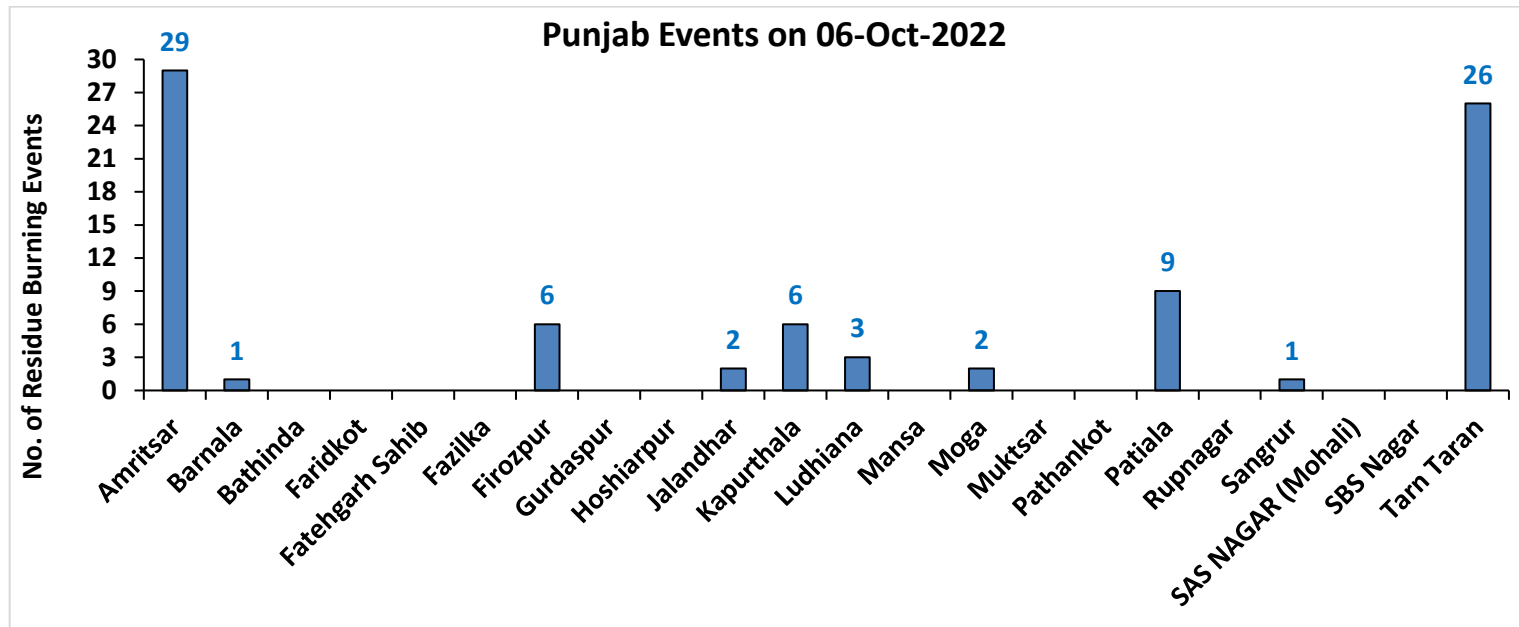
Fire Intensity (W/m²)

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



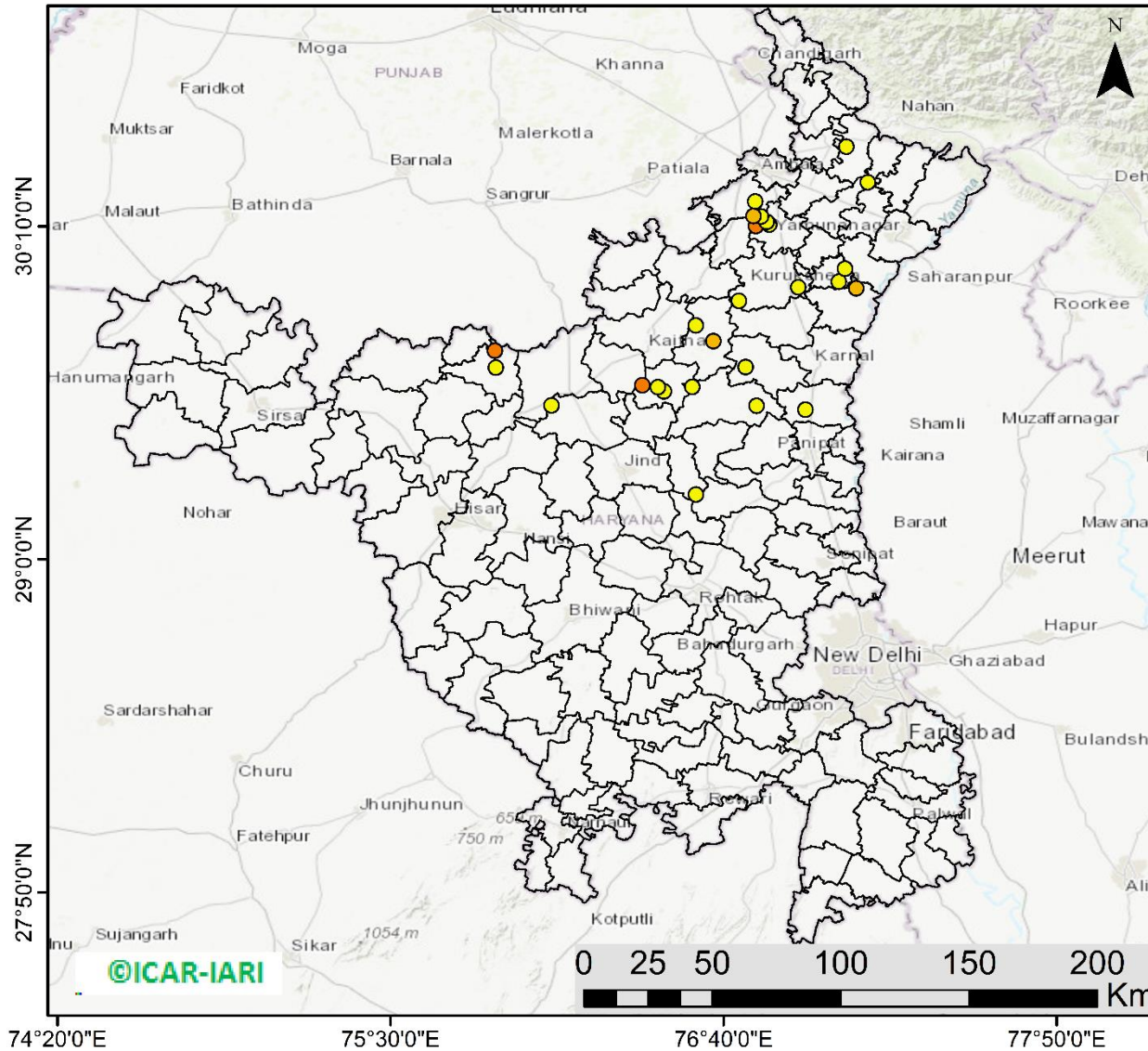
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (15Sep- 06Oct-2022)



Haryana

RICE RESIDUE BURNING IN HARYANA



26 burning events detected in Haryana on (06th Oct 2022)

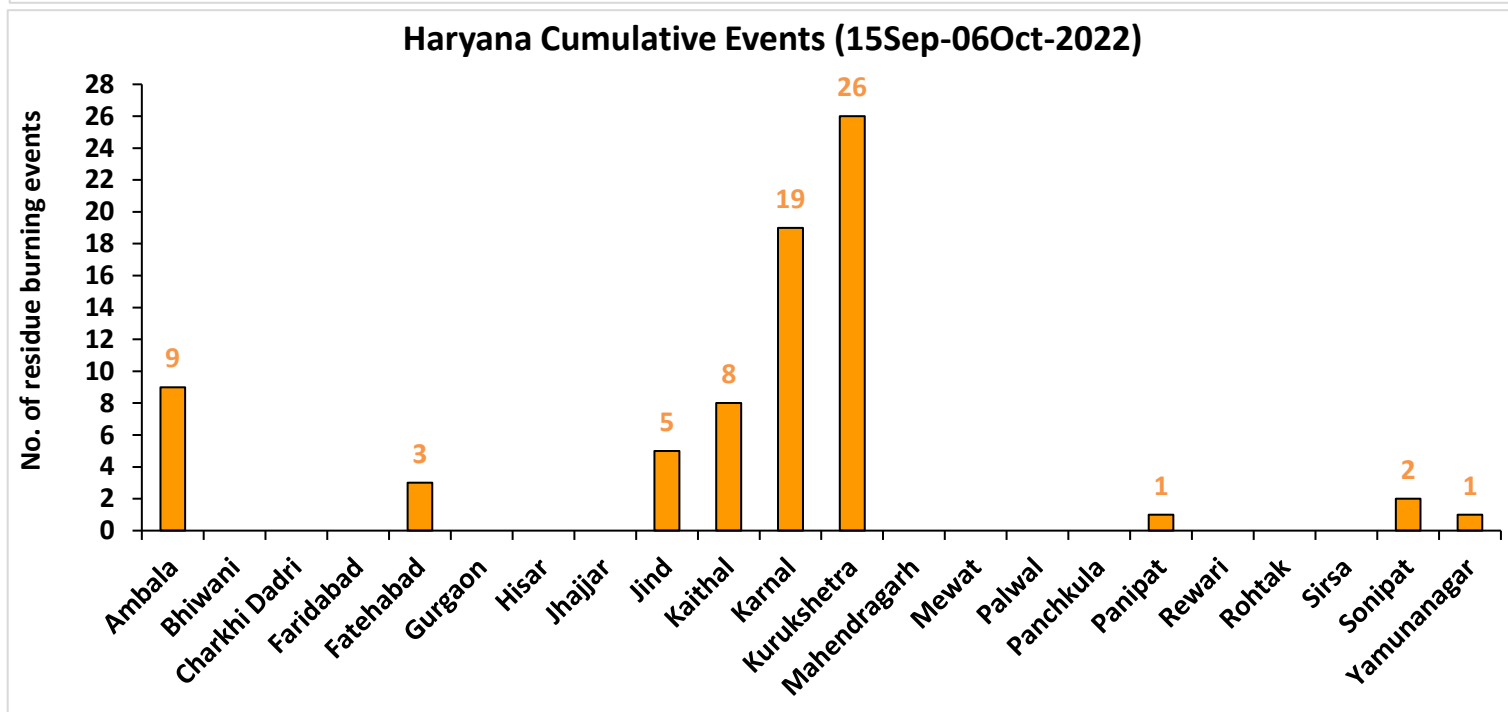
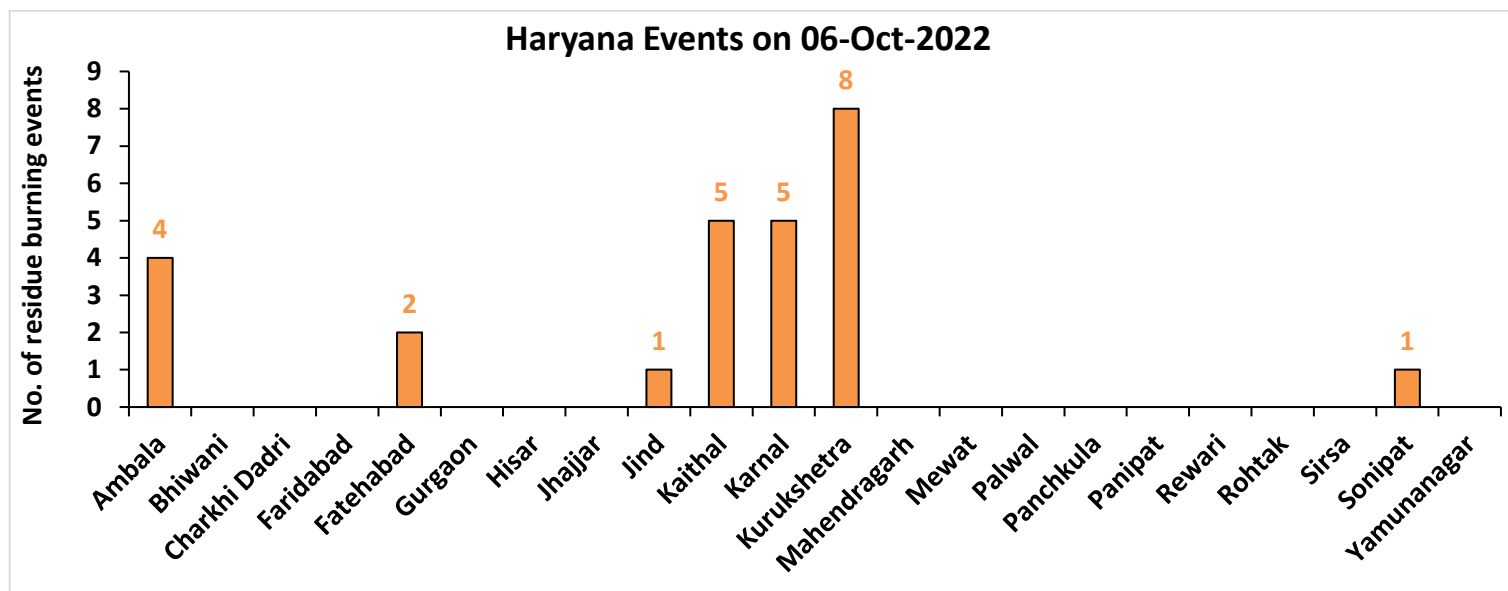
Fire Intensity (W/m²)

- 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- 06Oct-2022)



District-wise cumulative number of residues burning events detected in 2020 ,2021 and 2022
(Period: 15 September-06 October)

(a) Punjab

District	15 Sep-06 Oct 2022		
	2020	2021	2022
Amritsar	1141	190	419
Barnala	5	0	2
Bathinda	0	0	0
Faridkot	5	9	2
Fatehgarh Sahib	19	3	3
Fazilka	0	1	0
Firozpur	40	5	15
Gurdaspur	84	5	7
Hoshiarpur	3	0	0
Jalandhar	21	7	12
Kapurthala	28	4	19
Ludhiana	46	23	6
Mansa	2	0	1
Moga	12	2	2
Muktsar	1	1	1
Pathankot	0	0	0
Patiala	89	12	22
Rupnagar	4	1	0
Sangrur	32	4	7
SAS NAGAR (Mohali)	10	2	4
SBS Nagar	2	1	2
Tarn Taran	391	50	106
Total	1935	320	630

(b) Haryana

District	15 Sep-06 Oct 2022		
	2020	2021	2022
AMBALA	27	1	9
BHIWANI	0	0	0
CHARKHI DADRI	0	0	0
FARIDABAD	0	0	0
FATEHABAD	17	1	3
GURGAON	0	0	0
HISAR	3	0	0
JHAJJAR	0	0	0
JIND	2	0	5
KAITHAL	29	2	8
KARNAL	55	5	19
KURUKSHETRA	43	13	26
MAHENDRAGARH	0	0	0
MEWAT	0	0	0
PALWAL	2	0	0
PANCHKULA	0	0	0
PANIPAT	6	0	1
REWARI	0	0	0
ROHTAK	0	0	0
SIRSA	2	0	0
SONIPAT	5	1	2
YAMUNANAGAR	16	1	1
Total	207	24	74

(c) Uttar Pradesh

District	15 Sep-06 Oct 2022										
	2020	2021	2022	GAUTAMBUDHNAGAR	1	0	0	MUZAFARNAGAR	2	0	0
AGRA	0	0	0	GAZIPUR	0	0	0	PILHIBHIT	3	1	2
ALIGARH	7	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	5	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	11	0	4	HARDOI	0	0	0	SANTRAVIDASNAGAR	0	0	0
AZAMGARH	0	0	0	HATHRAS	0	0	0	SHAHJAHANPUR	6	37	53
BADAUN	0	0	0	JALAUN	0	0	0	SHAMLI	10	2	2
BAGHPAT	1	0	0	JAUNPUR	0	0	0	SHARANPUR	4	0	0
BAHRAICH	1	0	0	JHANSI	4	0	0	SHRAWASTI	0	0	0
BALLIA	0	0	0	KANNAUJ	2	0	0	SIDDHARTHANAGAR	0	0	0
BALRAMPUR	0	0	0	KANPUR	0	1	0	SITAPUR	3	0	0
BANDA	0	0	0	KANPUR DEHAT	1	0	0	SONBHADRA	0	0	0
BARABANKI	1	0	0	KASGANJ	1	0	0	SULTANPUR	0	0	0
BAREILLY	4	0	0	KAUSHAMBI	1	0	0	UNNAO	2	0	0
BASTI	0	0	0	KHERI	4	3	8	VARANASI	0	0	0
BIJNOR	3	0	1	KUSHINAGAR	0	0	0	Total	101	52	80
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	3	0	0	MAINPURI	0	1	0				
ETAWAH	0	0	0	MATHURA	2	1	0				
FAIZABAD	0	0	0	MAU	0	0	0				
FARRUKHABAD	0	0	0	MEERUT	8	0	0				
FATEHPUR	2	0	0	MIRZAPUR	0	0	0				
FIROZABAD	1	0	0	MORADABAD	1	0	0				

(d) Delhi

District	15 Sep-06 Oct 2022		
	2020	2021	2022
CENTRAL	0	0	0
EAST	0	0	0
NEW DELHI	0	0	0
NORTH	2	0	2
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	3	0	2

(e) Rajasthan

District	15 Sep-06 Oct 2022		
	2020	2021	2022
AJMER	0	0	0
ALWAR	1	0	0
BANSWARA	0	0	0
BARAN	39	0	3
BARMER	2	0	0
BHARATPUR	0	0	0
BHILWARA	1	0	0
BIKANER	0	0	0
BUNDI	1	0	3
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	11	0	1
JAIPUR	0	0	0
JAISELMER	2	0	0
JALOR	0	0	0
JHALAWAR	0	0	0
JHUNJHUNUN	1	0	0
JODHPUR	1	0	0
KARAULI	1	0	0
KOTA	11	0	1
NAGAUR	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	74	1	8

(f) Madhya Pradesh

District	15 Sep-06 Oct 2022						
	2020	2021	2022				
				PANNA	0	0	0
ALIRAJPUR	0	0	0	RAISEN	2	0	0
ANUPPUR	0	0	0	RAJGARH	1	0	2
ASHOKNAGAR	6	0	0	RATLAM	0	0	0
BALAGHAT	0	0	0	REWA	1	0	0
BARWANI	0	0	0	SAGAR	3	2	1
BETUL	0	0	0	SATNA	3	0	0
BHIND	0	0	0	SEHORE	4	0	1
BHOPAL	2	0	0	SEONI	0	0	0
BURHANPUR	0	0	0	SHAHDOL	0	0	0
CHHATARPUR	1	0	0	SHAJAPUR	4	0	0
CHHINDWARA	0	0	0	SHEOPUR	0	0	0
DAMOH	6	0	0	SHIVPURI	0	0	0
DATIA	2	0	0	SIDHI	0	0	0
DEWAS	2	0	0	SINGRAULI	0	0	0
DHAR	10	0	0	TIKAMGARH	0	0	0
DINDORI	0	0	0	UJJAIN	5	0	0
EAST NIMAR	0	0	0	UMARIA	0	0	0
GUNA	6	1	1	VIDESHA	15	1	1
GWALIOR	6	0	1	WEST NIMAR	0	0	0
HARDA	7	6	0	Total	97	10	7
HOSHANGABAD	3	0	0				
INDORE	1	0	0				
JABALPUR	4	0	0				
JHABUA	0	0	0				
KATNI	0	0	0				
MANDLA	0	0	0				
MANDSAUR	0	0	0				
MORENA	3	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 - 06 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
04-Oct	162	23	65	29	2	7	8	0	2	0	0	0	15	0	0	4	2	0
05-Oct	161	18	130	17	3	24	14	2	0	0	0	2	14	0	1	13	1	0
06-Oct	171	42	85	30	0	26	12	1	0	1	0	0	16	0	0	37	1	0
Total	1935	320	630	207	24	74	101	52	80	3	0	2	74	1	8	97	10	7

Details of residue burning events in Punjab on 06-Oct-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMRITSAR	ATTARI	S-NPP	31.60010	74.74570	13:48:37	D	2.90
2	AMRITSAR	CHOGAWAN	S-NPP	31.68210	74.72460	13:48:37	D	3.80
3	AMRITSAR	HARSHA CHHINA	S-NPP	31.80140	74.93230	13:48:37	D	3.80
4	AMRITSAR	HARSHA CHHINA	S-NPP	31.80270	74.91010	13:48:37	D	4.30
5	AMRITSAR	JANDIALA GURU	S-NPP	31.54890	75.05620	13:48:37	D	5.70
6	AMRITSAR	JANDIALA GURU	S-NPP	31.55840	75.03810	13:48:37	D	5.90
7	AMRITSAR	JANDIALA GURU	S-NPP	31.59810	75.09570	13:48:37	D	2.80
8	AMRITSAR	JANDIALA GURU	S-NPP	31.59960	75.00680	13:48:37	D	7.20
9	AMRITSAR	JANDIALA GURU	S-NPP	31.60260	75.06720	13:48:37	D	5.30
10	AMRITSAR	JANDIALA GURU	S-NPP	31.60540	74.98940	13:48:37	D	3.00
11	AMRITSAR	JANDIALA GURU	S-NPP	31.62050	75.02010	13:48:37	D	3.60
12	AMRITSAR	JANDIALA GURU	S-NPP	31.62430	75.01950	13:48:37	D	3.60
13	AMRITSAR	JANDIALA GURU	S-NPP	31.63200	74.98520	13:48:37	D	3.30
14	AMRITSAR	JANDIALA GURU	S-NPP	31.66680	75.01840	13:48:37	D	5.70
15	AMRITSAR	RAYYA	S-NPP	31.50270	75.23090	13:48:37	D	6.00
16	AMRITSAR	RAYYA	S-NPP	31.50450	75.22710	13:48:37	D	11.10
17	AMRITSAR	RAYYA	S-NPP	31.50650	75.23030	13:48:37	D	11.60
18	AMRITSAR	RAYYA	S-NPP	31.54060	75.15200	13:48:37	D	3.60
19	AMRITSAR	RAYYA	S-NPP	31.57440	75.20850	13:48:37	D	4.40
20	AMRITSAR	TARSIKKA	S-NPP	31.58200	75.10650	13:48:37	D	4.30
21	AMRITSAR	TARSIKKA	S-NPP	31.58330	75.15100	13:48:37	D	5.30
22	AMRITSAR	TARSIKKA	S-NPP	31.58400	75.10910	13:48:37	D	8.80
23	AMRITSAR	TARSIKKA	S-NPP	31.58580	75.10590	13:48:37	D	12.00
24	AMRITSAR	TARSIKKA	S-NPP	31.58790	75.10850	13:48:37	D	8.80
25	AMRITSAR	TARSIKKA	S-NPP	31.60880	75.12190	13:48:37	D	8.30
26	AMRITSAR	TARSIKKA	S-NPP	31.64210	75.03890	13:48:37	D	6.50
27	AMRITSAR	TARSIKKA	S-NPP	31.67840	75.18420	13:48:37	D	5.60
28	AMRITSAR	TARSIKKA	S-NPP	31.69360	75.09520	13:48:37	D	3.10
29	AMRITSAR	VERKA	S-NPP	31.69780	74.96130	13:48:37	D	9.30
30	BARNALA	BARNALA	S-NPP	30.30820	75.44080	13:48:37	D	4.10

31	FIROZPUR	FIROZPUR	S-NPP	30.96670	74.51740	13:48:37	D	2.20
32	FIROZPUR	FIROZPUR	S-NPP	30.96800	74.52750	13:48:37	D	5.30
33	FIROZPUR	FIROZPUR	S-NPP	30.97290	74.53690	13:48:37	D	9.50
34	FIROZPUR	MAKHU	S-NPP	31.11940	74.85620	13:48:37	D	3.30
35	FIROZPUR	MAMDOT	S-NPP	30.79240	74.36630	13:48:37	D	3.90
36	FIROZPUR	MAMDOT	S-NPP	30.94650	74.47470	13:48:37	D	2.80
37	JALANDHAR	MEHATPUR	S-NPP	30.99540	75.51990	13:48:37	D	8.70
38	JALANDHAR	MEHATPUR	S-NPP	30.99550	75.51750	13:48:37	D	4.70
39	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.20770	75.15440	13:48:37	D	7.70
40	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.22870	75.13460	13:48:37	D	5.10
41	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.25920	75.16300	13:48:37	D	4.90
42	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.28090	75.21520	13:48:37	D	3.60
43	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.34660	75.25970	13:48:37	D	4.00
44	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.34730	75.26520	13:48:37	D	4.10
45	LUDHIANA	MACHHIWARA	S-NPP	30.83200	76.28450	13:48:37	D	3.60
46	LUDHIANA	MACHHIWARA	S-NPP	30.83380	76.26360	13:48:37	D	4.10
47	LUDHIANA	SIDHWAN BET	S-NPP	30.97910	75.44040	13:48:37	D	2.90
48	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.96920	75.35180	13:48:37	D	8.00
49	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.97140	75.34830	13:48:37	D	3.50
50	PATIALA	GHANAUR	S-NPP	30.38570	76.64440	13:48:37	D	2.10
51	PATIALA	PATIALA	S-NPP	30.27860	76.26330	13:48:37	D	3.60
52	PATIALA	PATIALA	S-NPP	30.28260	76.26270	13:48:37	D	3.60
53	PATIALA	SAMANA	S-NPP	30.15840	76.25240	13:48:37	D	6.30
54	PATIALA	SAMANA	S-NPP	30.21790	76.26600	13:48:37	D	5.40
55	PATIALA	SAMANA	S-NPP	30.22040	76.26160	13:48:37	D	5.00
56	PATIALA	SANAUR	S-NPP	30.22320	76.27740	13:48:37	D	3.00
57	PATIALA	SANAUR	S-NPP	30.25720	76.29080	13:48:37	D	10.00
58	PATIALA	SHAMBU KALAN	S-NPP	30.47100	76.66230	13:48:37	D	2.90
59	SANGRUR	BHAWANIGARH	S-NPP	30.22510	76.10870	13:48:37	D	4.60
60	TARN TARAN	CHOHLA SAHIB	S-NPP	31.25560	75.04100	13:48:37	D	3.30
61	TARN TARAN	CHOHLA SAHIB	S-NPP	31.25650	75.04230	13:48:37	D	3.80
62	TARN TARAN	CHOHLA SAHIB	S-NPP	31.30560	74.97310	13:48:37	D	3.90
63	TARN TARAN	GANDIWIND TATLA	S-NPP	31.53300	74.79140	13:48:37	D	2.50

64	TARN TARAN	KHADUR SAHIB	S-NPP	31.40490	75.14190	13:48:37	D	4.40
65	TARN TARAN	KHADUR SAHIB	S-NPP	31.42860	75.04410	13:48:37	D	1.80
66	TARN TARAN	KHADUR SAHIB	S-NPP	31.46860	75.15430	13:48:37	D	3.70
67	TARN TARAN	KHADUR SAHIB	S-NPP	31.47240	75.15370	13:48:37	D	3.70
68	TARN TARAN	KHADUR SAHIB	S-NPP	31.47590	75.06210	13:48:37	D	4.60
69	TARN TARAN	KHADUR SAHIB	S-NPP	31.47740	75.06410	13:48:37	D	4.90
70	TARN TARAN	KHADUR SAHIB	S-NPP	31.48140	75.11110	13:48:37	D	3.70
71	TARN TARAN	KHADUR SAHIB	S-NPP	31.48320	75.11300	13:48:37	D	1.90
72	TARN TARAN	KHADUR SAHIB	S-NPP	31.48340	75.09410	13:48:37	D	7.70
73	TARN TARAN	KHADUR SAHIB	S-NPP	31.48350	75.06090	13:48:37	D	3.70
74	TARN TARAN	KHADUR SAHIB	S-NPP	31.48510	75.09610	13:48:37	D	5.10
75	TARN TARAN	KHADUR SAHIB	S-NPP	31.52460	75.18250	13:48:37	D	5.30
76	TARN TARAN	NAUSHERA PANNUAN	S-NPP	31.36560	75.02370	13:48:37	D	3.00
77	TARN TARAN	NAUSHERA PANNUAN	S-NPP	31.36790	75.02070	13:48:37	D	3.80
78	TARN TARAN	NAUSHERA PANNUAN	S-NPP	31.36850	75.02610	13:48:37	D	3.80
79	TARN TARAN	NAUSHERA PANNUAN	S-NPP	31.36940	75.02310	13:48:37	D	4.70
80	TARN TARAN	TARN TARAN	S-NPP	31.46250	74.87510	13:48:37	D	4.20
81	TARN TARAN	TARN TARAN	S-NPP	31.46270	74.87820	13:48:37	D	3.50
82	TARN TARAN	TARN TARAN	S-NPP	31.47180	74.99110	13:48:37	D	5.10
83	TARN TARAN	TARN TARAN	S-NPP	31.47220	74.98790	13:48:37	D	4.10
84	TARN TARAN	TARN TARAN	S-NPP	31.51210	75.03980	13:48:37	D	6.30
85	TARN TARAN	TARN TARAN	S-NPP	31.51280	74.97920	13:48:37	D	5.10

Details of residue burning events in Haryana on 06-Oct-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMBALA	AMBALA-II	S-NPP	30.20210	76.77180	13:48:37	D	7.30
2	AMBALA	AMBALA-II	S-NPP	30.25290	76.77760	13:48:37	D	3.80
3	AMBALA	BARARA	S-NPP	30.32020	77.17220	13:48:37	D	3.60
4	AMBALA	NARAINGARH	S-NPP	30.44520	77.09720	13:48:37	D	3.80
5	FATEHABAD	TOHANA	S-NPP	29.67130	75.86900	13:48:37	D	4.20
6	FATEHABAD	TOHANA	S-NPP	29.73030	75.86590	13:48:37	D	12.30
7	JIND	UCHANA	S-NPP	29.53900	76.06380	13:48:37	D	2.80
8	KAITHAL	PUNDRI	S-NPP	29.76380	76.63130	13:48:37	D	7.10
9	KAITHAL	PUNDRI	S-NPP	29.81880	76.56960	13:48:37	D	1.50
10	KAITHAL	RAJOUND	S-NPP	29.58820	76.45800	13:48:37	D	2.40
11	KAITHAL	RAJOUND	S-NPP	29.60290	76.43660	13:48:37	D	1.40
12	KAITHAL	RAJOUND	S-NPP	29.60920	76.38240	13:48:37	D	10.10
13	KARNAL	ASSANDH	S-NPP	29.53740	76.78270	13:48:37	D	2.60
14	KARNAL	ASSANDH	S-NPP	29.60360	76.55750	13:48:37	D	3.50
15	KARNAL	CHIRAO	S-NPP	29.67310	76.74400	13:48:37	D	3.30
16	KARNAL	GHARAUNDA	S-NPP	29.52390	76.95390	13:48:37	D	1.90
17	KARNAL	INDRI	S-NPP	29.94890	77.13160	13:48:37	D	5.60
18	KURUKSHETRA	ISMAILABAD	S-NPP	30.16690	76.78010	13:48:37	D	11.10
19	KURUKSHETRA	LADWA	S-NPP	29.97220	77.07060	13:48:37	D	2.20
20	KURUKSHETRA	LADWA	S-NPP	30.01770	77.09210	13:48:37	D	3.50
21	KURUKSHETRA	SHAHBAD	S-NPP	30.17200	76.82680	13:48:37	D	4.10
22	KURUKSHETRA	SHAHBAD	S-NPP	30.18180	76.81780	13:48:37	D	3.60
23	KURUKSHETRA	SHAHBAD	S-NPP	30.20060	76.79790	13:48:37	D	4.30
24	KURUKSHETRA	THANESAR	S-NPP	29.90500	76.72060	13:48:37	D	3.00
25	KURUKSHETRA	THANESAR	S-NPP	29.95260	76.92840	13:48:37	D	3.90
26	SONIPAT	MUNDLANA	S-NPP	29.22650	76.56990	13:48:37	D	3.30

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>)
