



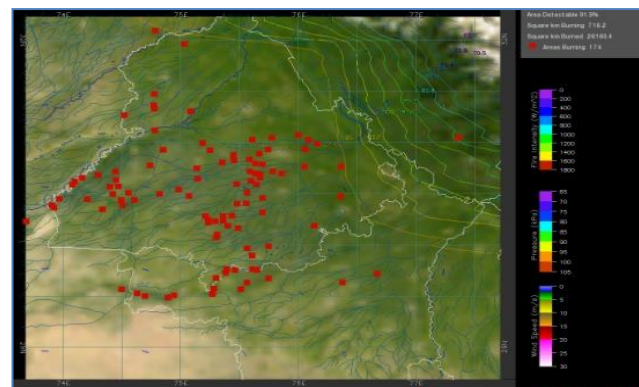
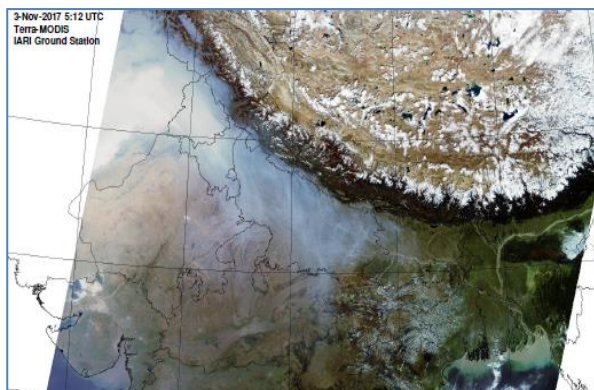
Bulletin No. 10

Events Date:
10-Oct-2020

Issued on:
11-Oct-2020



MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2020



Prepared by:

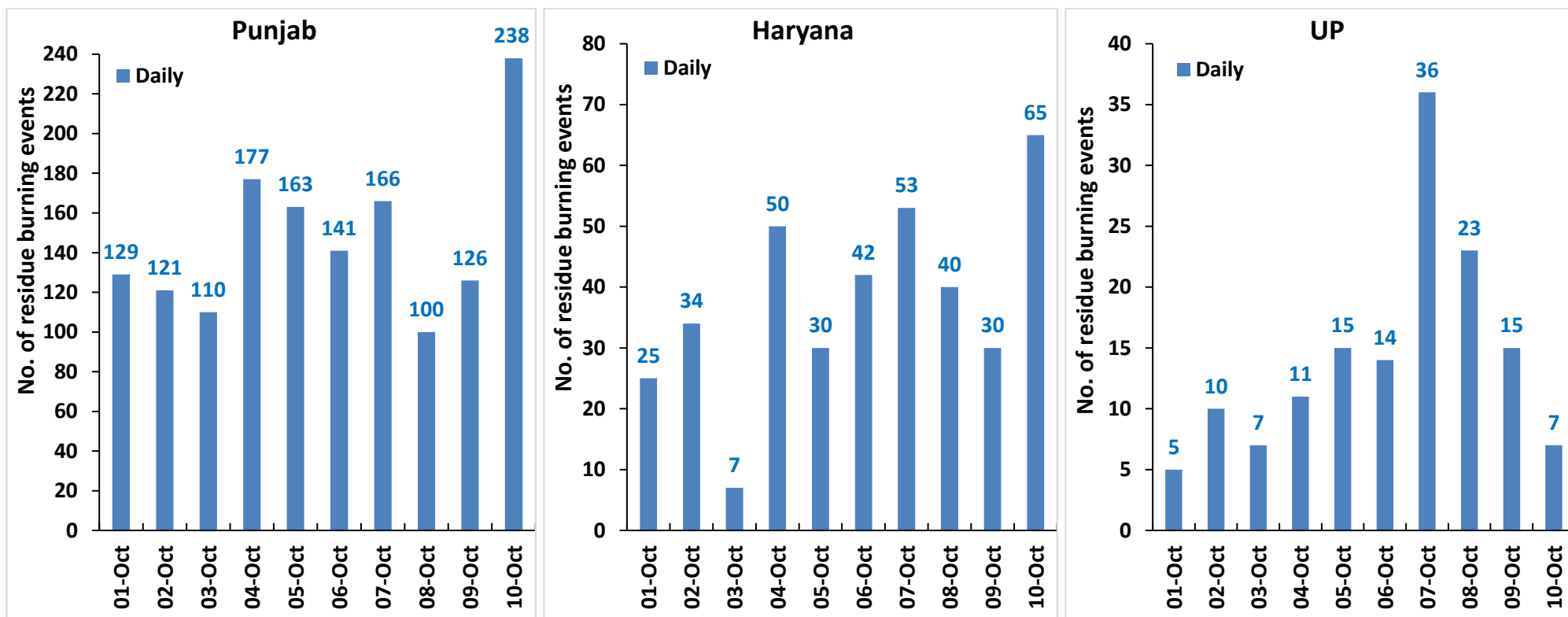
Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012

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

Highlights for 10-October-2020

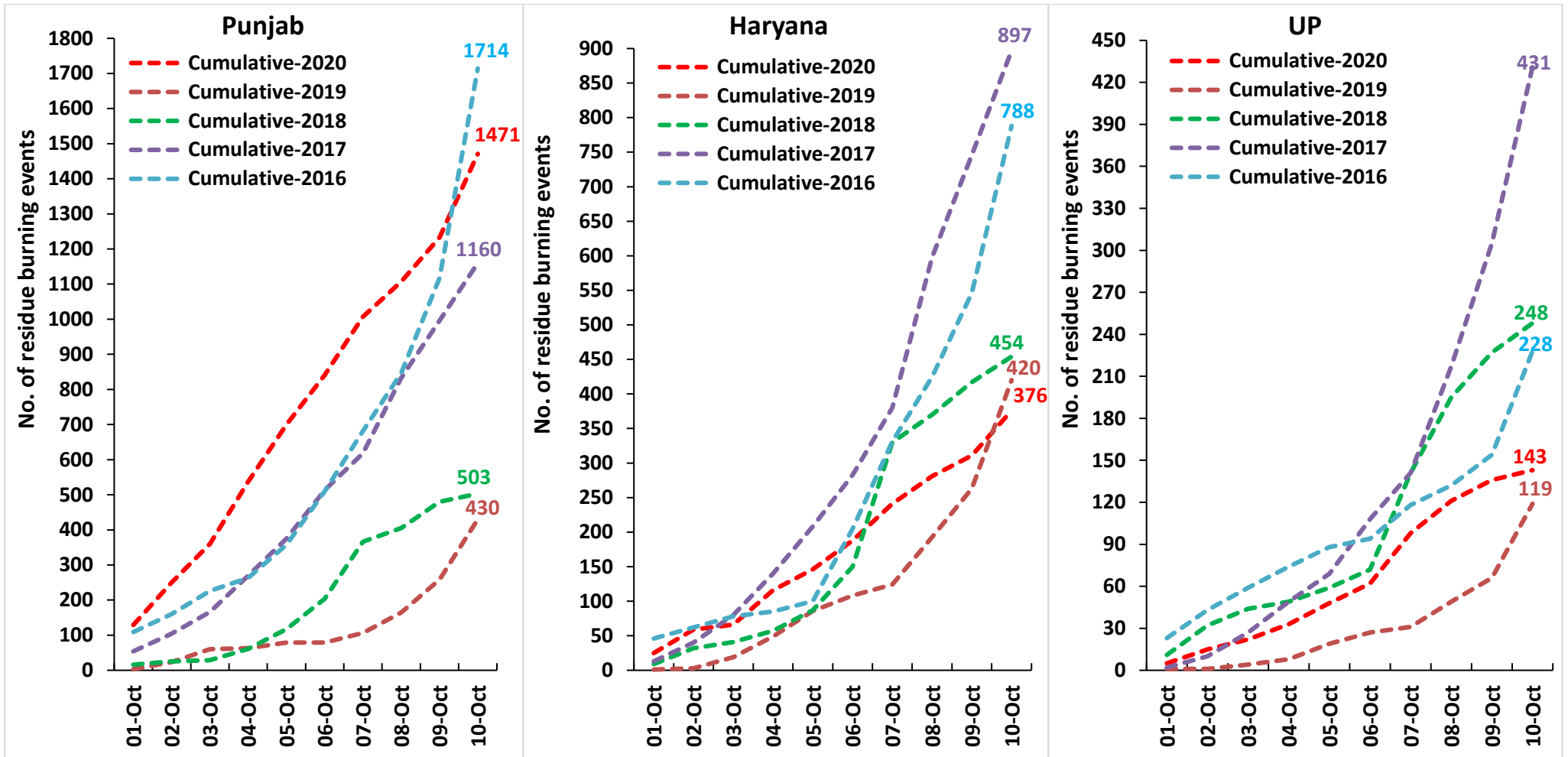
- Satellites detected **310** residue burning events in the three study States on 10-Oct-2020.
- The state wise events detected on **10-Oct-2020** were **238** in Punjab, **65** in Haryana and **07** in UP.
- In Punjab, the burning events were concentrated in Amritsar, Tarn Taran and Patiala districts.
- In Haryana, the burning events were concentrated in Kurukshetra, Ambala and Yamunanagar.
- Total **1990** burning events were detected in the three States between **01-Oct-2020** and **10-Oct-2020**, which are distributed as **1471**, **376** and **143** in Punjab, Haryana and UP, respectively.
- Amritsar, Tarn Taran and Patiala in Punjab; Kurukshetra, Karnal and Ambala in Haryana; and Aligarh, Kheri and Saharanpur in UP were the top three districts with burning events during **1-Oct to 10-Oct 2020**
- In Punjab and UP, the cumulative number of burning events between **1-Oct** and **10-Oct 2020** were higher than in **2019**.

Temporal distribution of residue burning events for the three study States in 2020

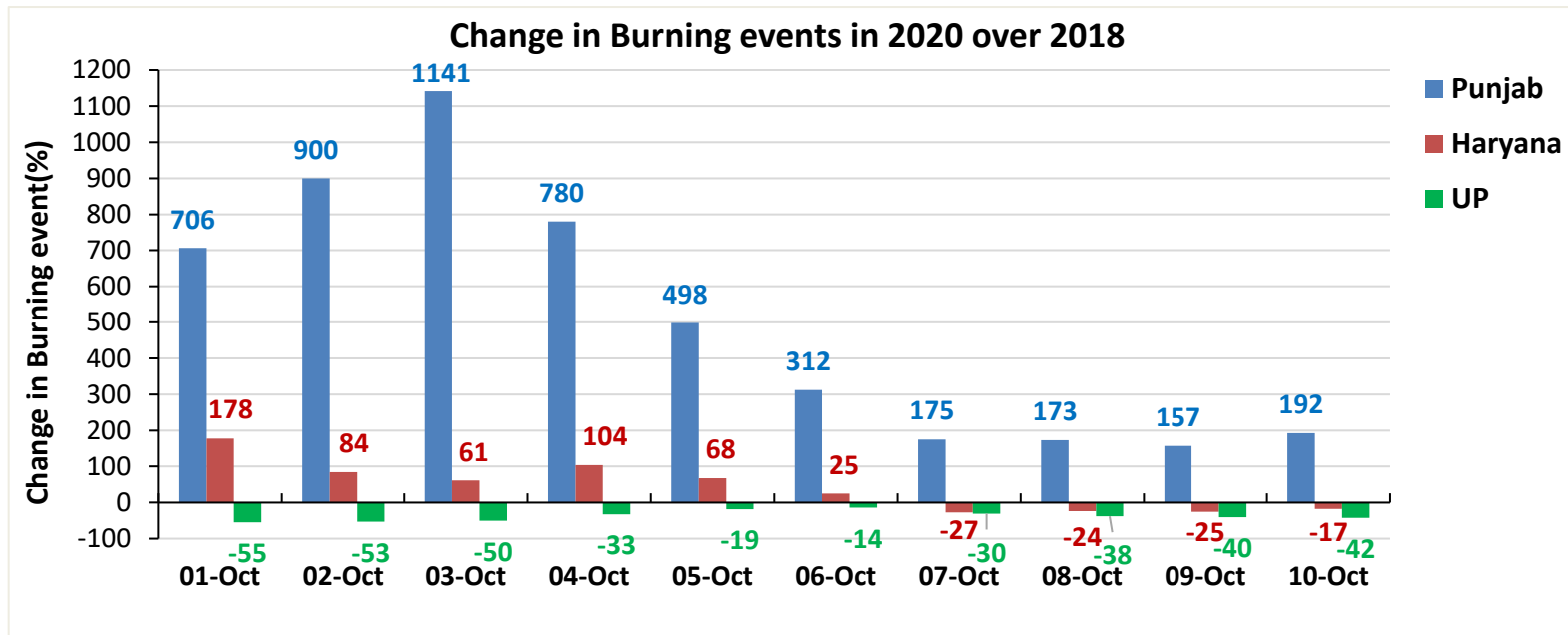
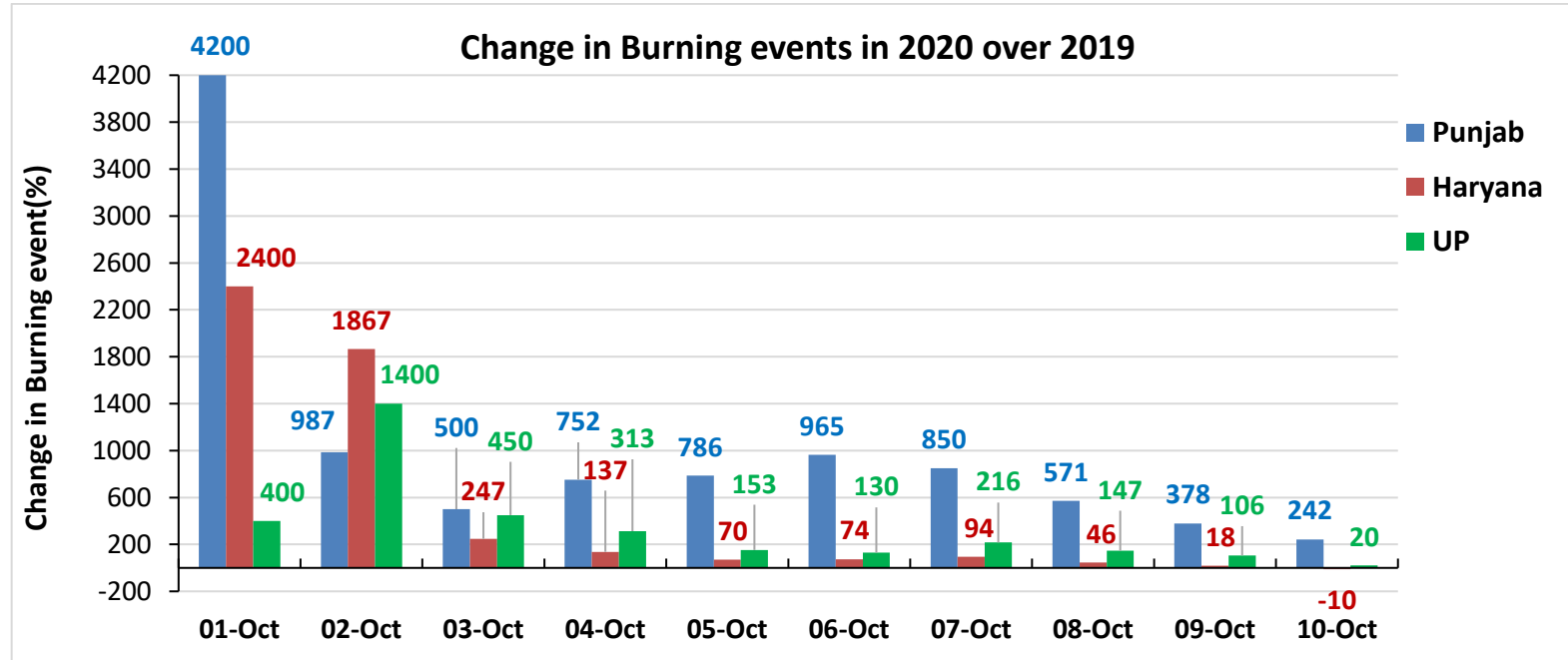


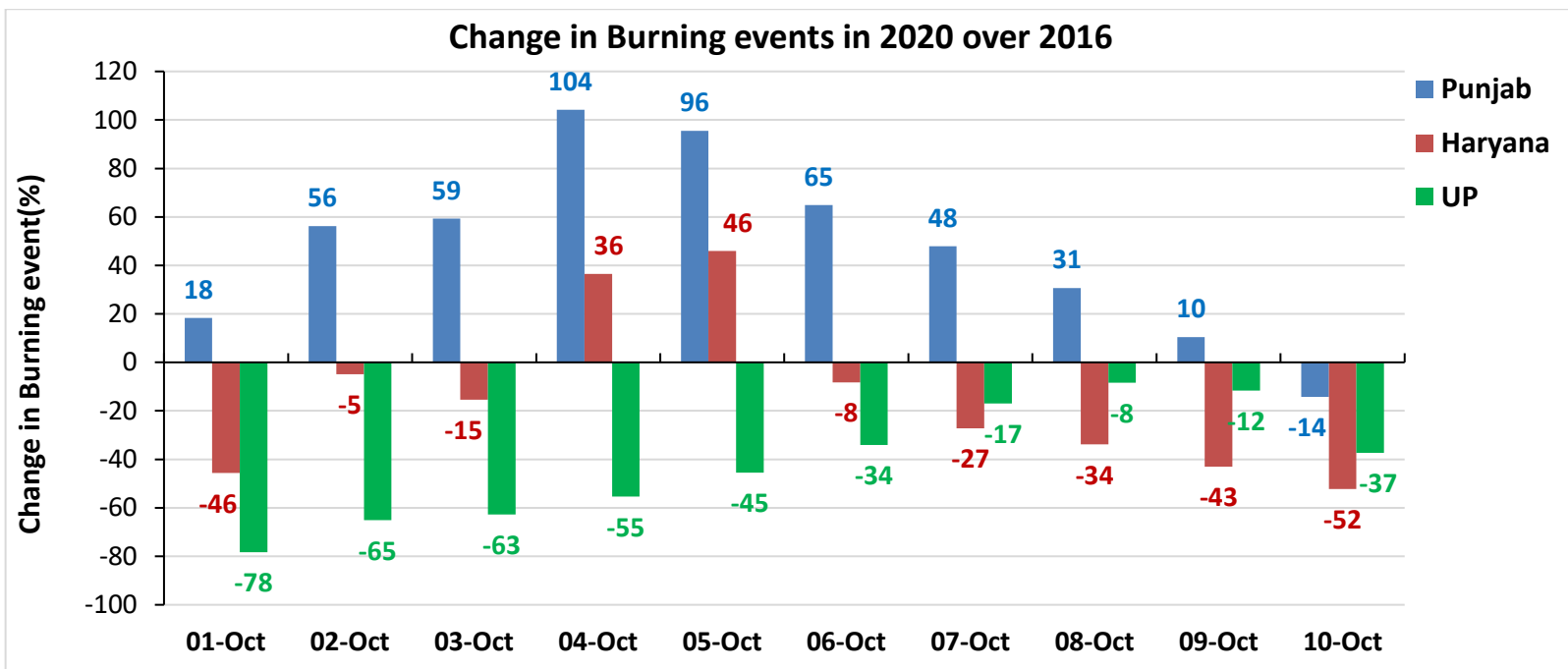
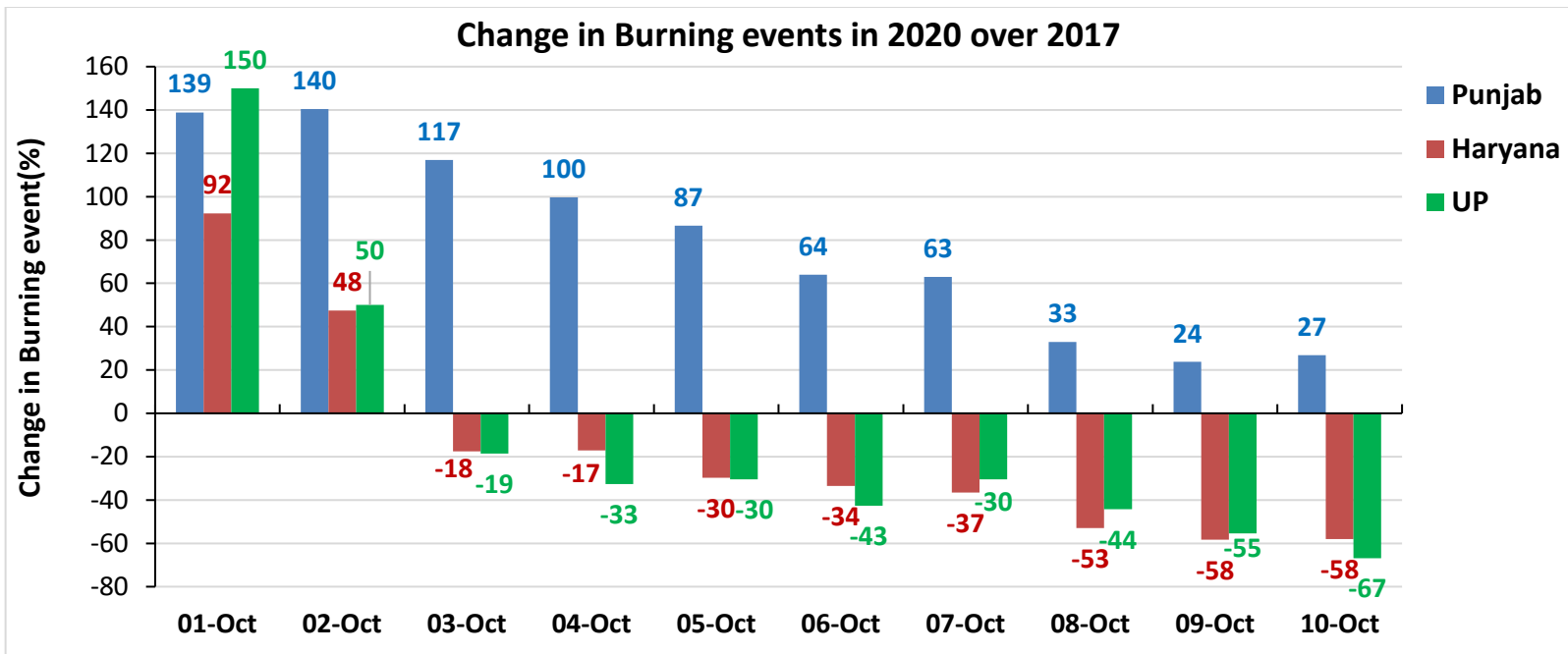
Comparison of residue burning events in current year (2020) with previous years (2019, 2018, 2017 & 2016) for the three study States

(01-Oct to 10-Oct)



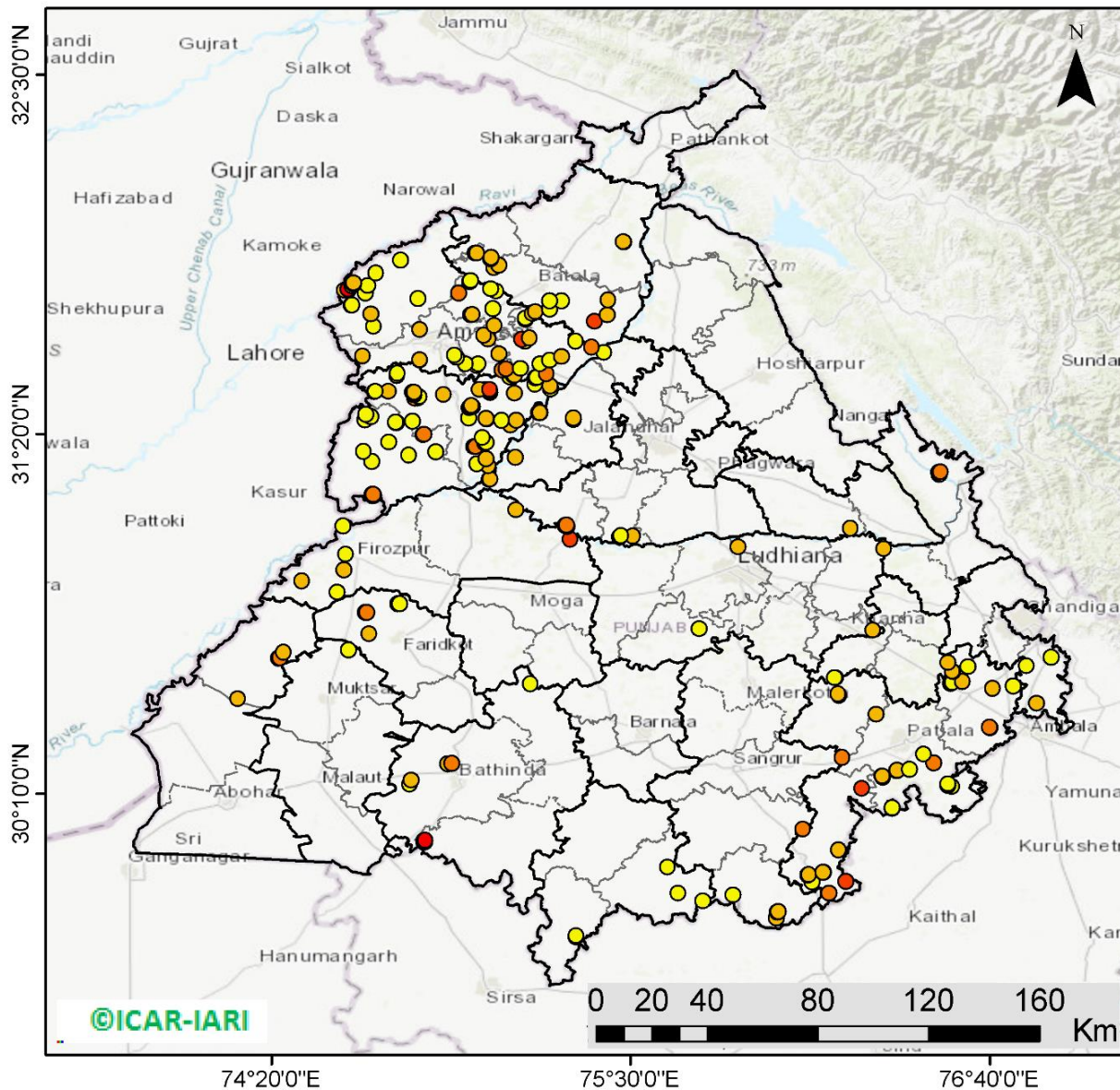
Percent Change in Burning events in 2020 over 2019, 2018, 2017 and 2016 (Daily Cumulative)





(a) Punjab

RICE RESIDUE BURNING IN PUNJAB



238 burning events detected in Punjab on 10th October 2020

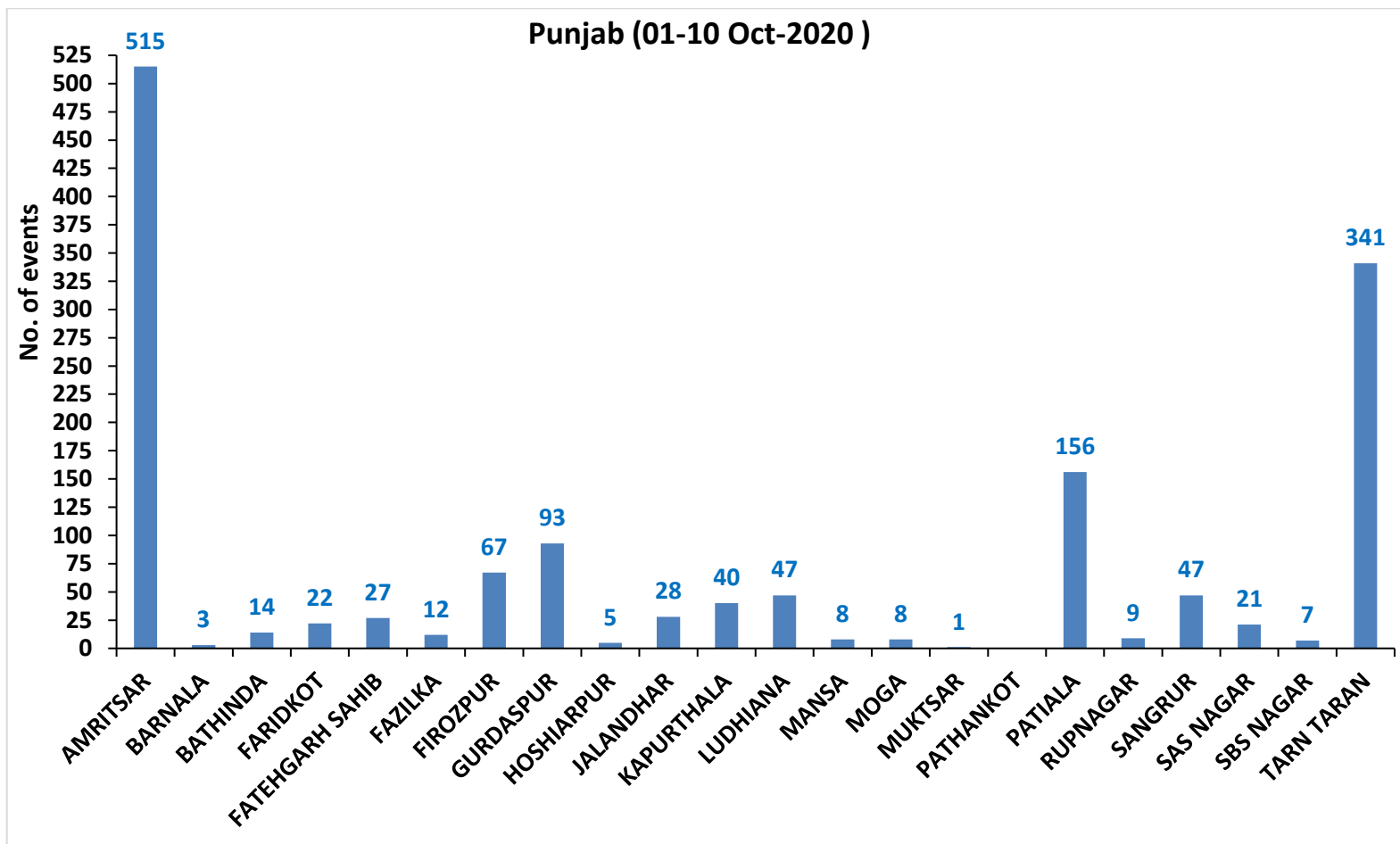
Fire Intensity (W/m²)

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



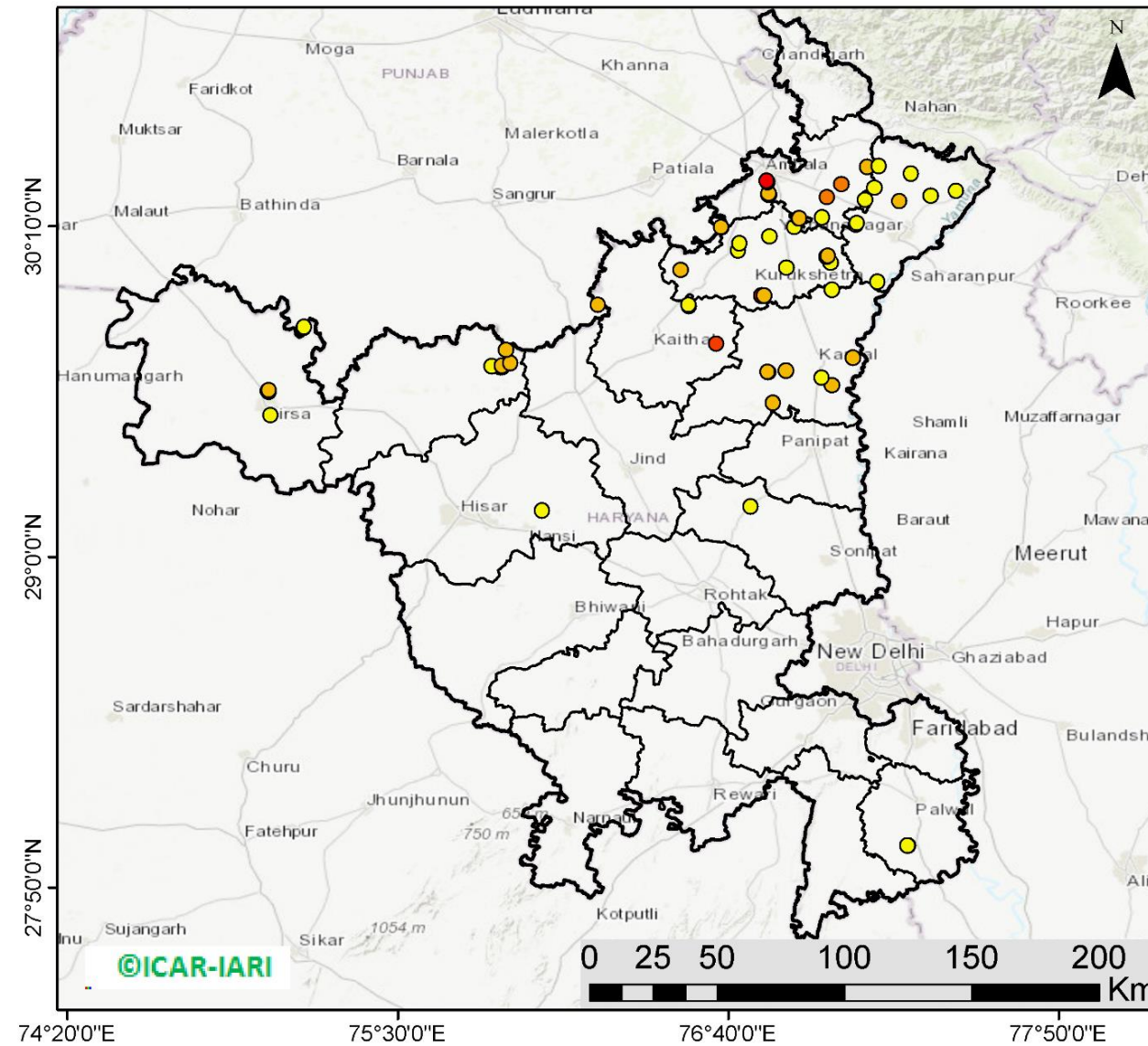
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residue burning events in Punjab (01-10 Oct-2020)



(b) Haryana

RICE RESIDUE BURNING IN HARYANA



65 burning events detected in Haryana on 10th October 2020

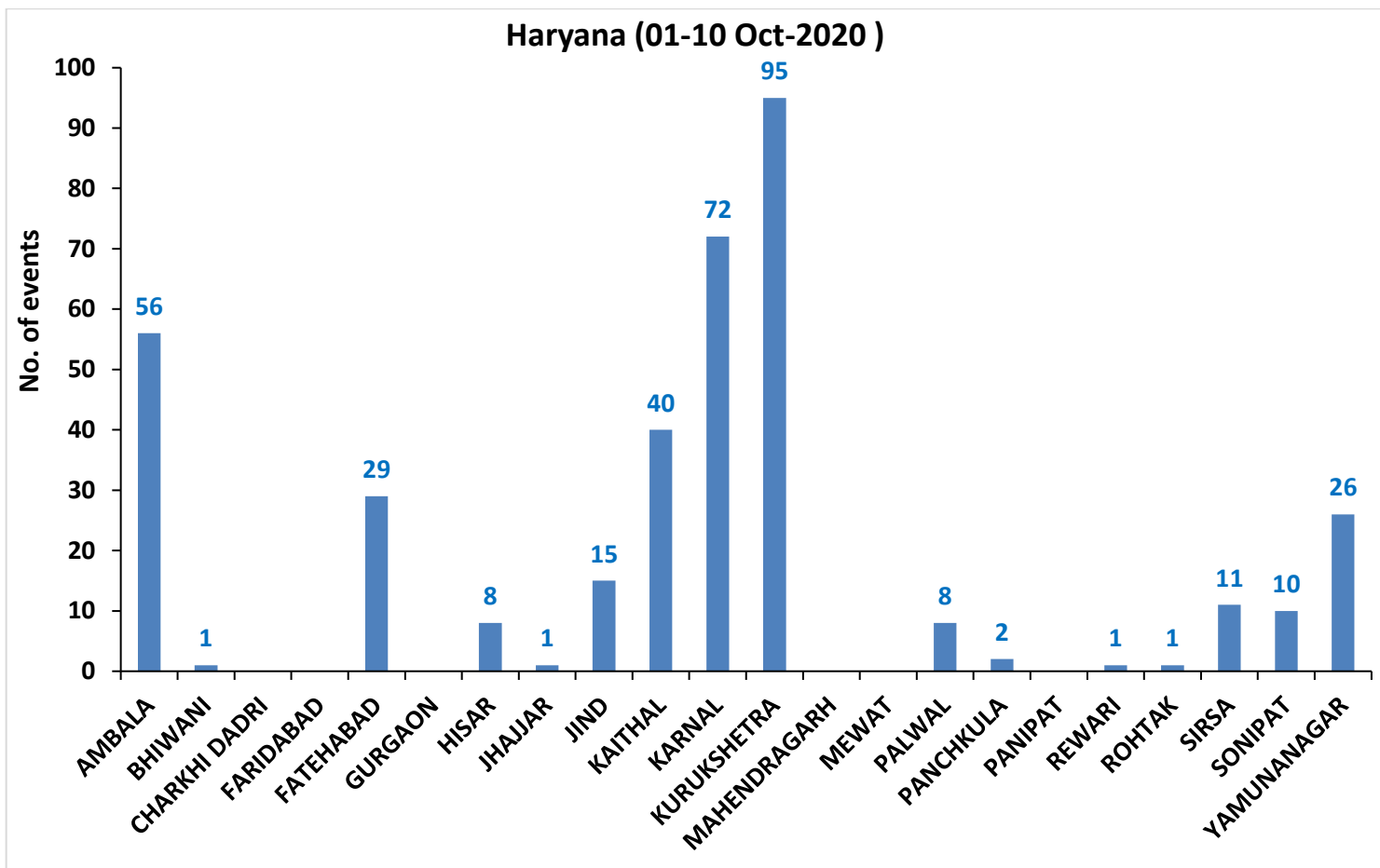
Fire Intensity (W/m²)

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



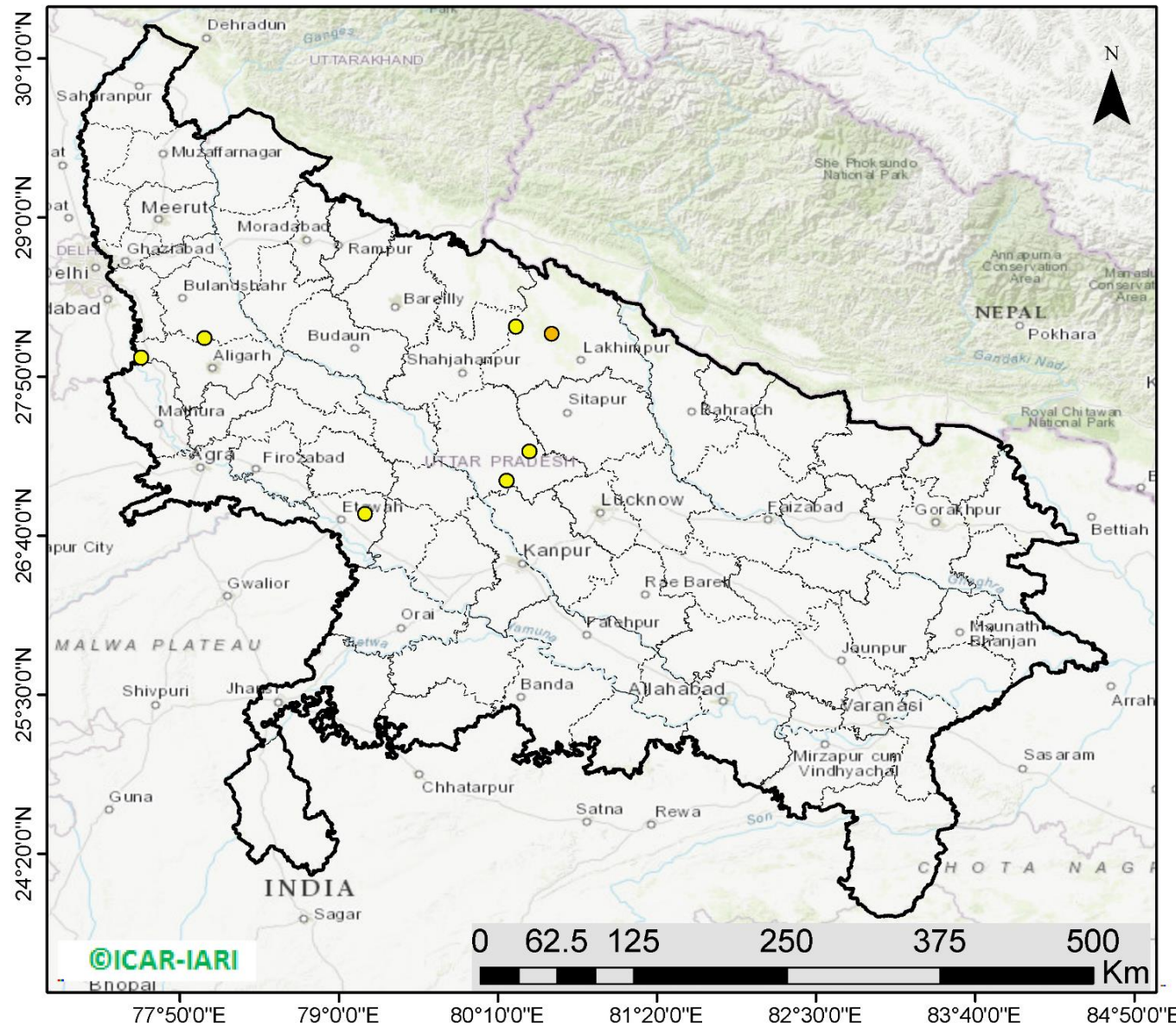
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residue burning events in Haryana (01-10 Oct-2020)



(c) Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



07 burning events detected in Uttar Pradesh on 10th October 2020

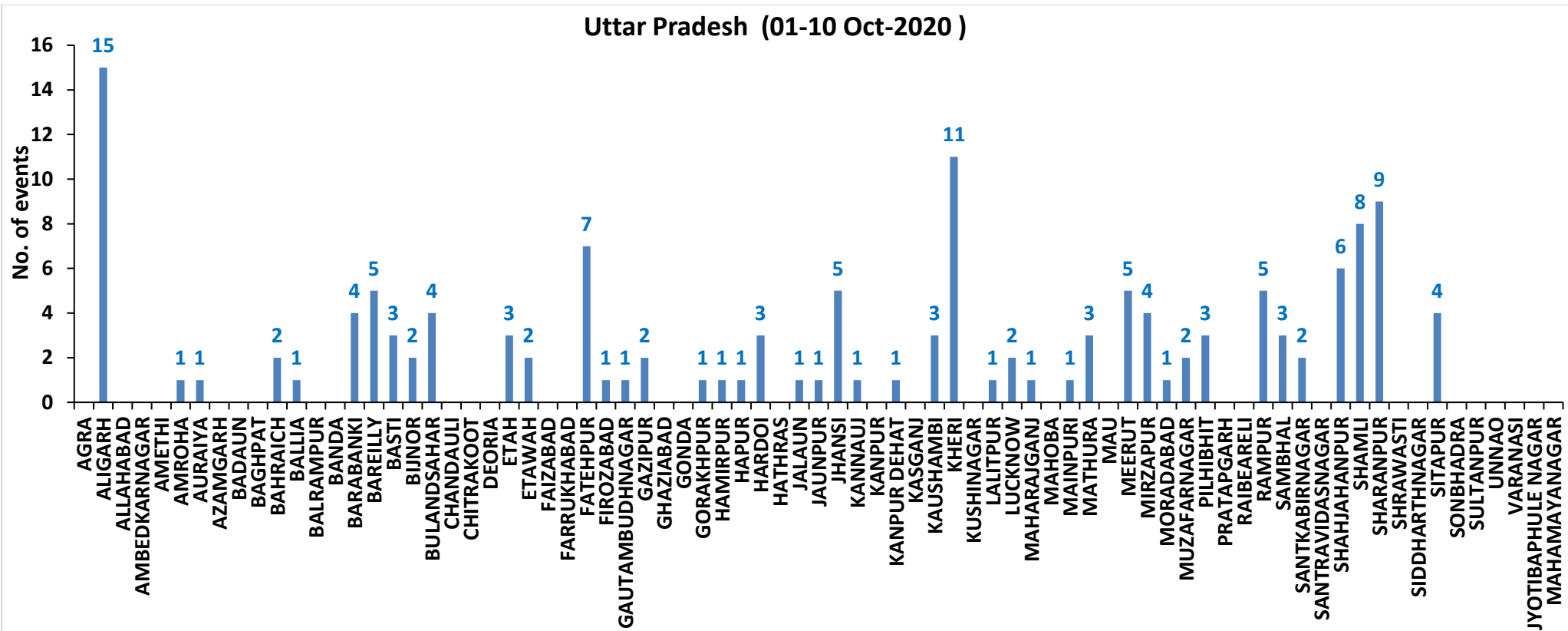
Fire Intensity (W/m²)

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



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

District-wise cumulative number of residue burning events in Uttar Pradesh (01-10 Oct-2020)



State-wise and date-wise number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020
(Period: 01-10 October)

Date	Punjab					Haryana					UP					Total				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
01-Oct	129	3	16	54	109	25	1	9	13	46	5	1	11	2	23	159	5	36	69	178
02-Oct	121	20	9	50	51	34	2	23	27	16	10	0	21	8	20	165	22	53	85	87
03-Oct	110	37	4	62	66	07	16	9	40	16	07	3	12	17	16	124	56	25	119	98
04-Oct	177	3	32	103	37	50	30	16	60	7	11	4	5	22	15	238	37	53	185	59
05-Oct	163	16	56	106	95	30	37	30	68	15	15	11	10	20	14	208	64	96	194	124
06-Oct	141	0	87	138	152	42	22	63	75	105	14	8	13	39	6	197	30	163	252	263
07-Oct	166	27	162	105	171	53	16	180	97	126	36	4	69	33	24	255	47	411	235	321
08-Oct	100	59	39	215	166	40	69	40	218	94	23	18	54	76	14	163	146	133	509	274
09-Oct	126	93	75	163	270	30	70	47	148	121	15	17	32	88	22	171	180	154	399	413
10-Oct	238	172	23	164	597	65	157	37	151	242	07	53	21	126	74	310	382	81	441	913
Total	1471	430	503	1160	1714	376	420	454	897	788	143	119	248	431	228	1990	969	1205	2488	2730

District-wise and date wise cumulative number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020
(Period: 01-10 October)

(a) Punjab

Districts	01-10 Oct				
	2016	2017	2018	2019	2020
AMRITSAR	411	312	280	180	515
BARNALA	6	1	1	0	3
BATHINDA	55	35	12	1	14
FARIDKOT	76	112	0	4	22
FATEHGARH SAHIB	101	34	9	2	27
FAZILKA	0	0	0	4	12
FIROZPUR	116	93	16	13	67
GURDASPUR	66	25	26	13	93
HOSHIARPUR	13	4	3	5	5
JALANDHAR	106	46	0	12	28
KAPURTHALA	90	13	2	9	40
LUDHIANA	74	81	17	6	47
MANSA	9	14	1	10	8
MOGA	13	8	0	6	8
MUKTSAR	87	11	2	2	1
PATHANKOT	0	0	0	0	0
PATIALA	138	124	33	45	156
RUPNAGAR	11	2	0	0	9
SANGRUR	28	57	19	18	47
SAS NAGAR	16	20	16	3	21
SBS NAGAR	24	15	4	5	7
TARN TARAN	274	153	62	92	341
Total	1714	1160	503	430	1471

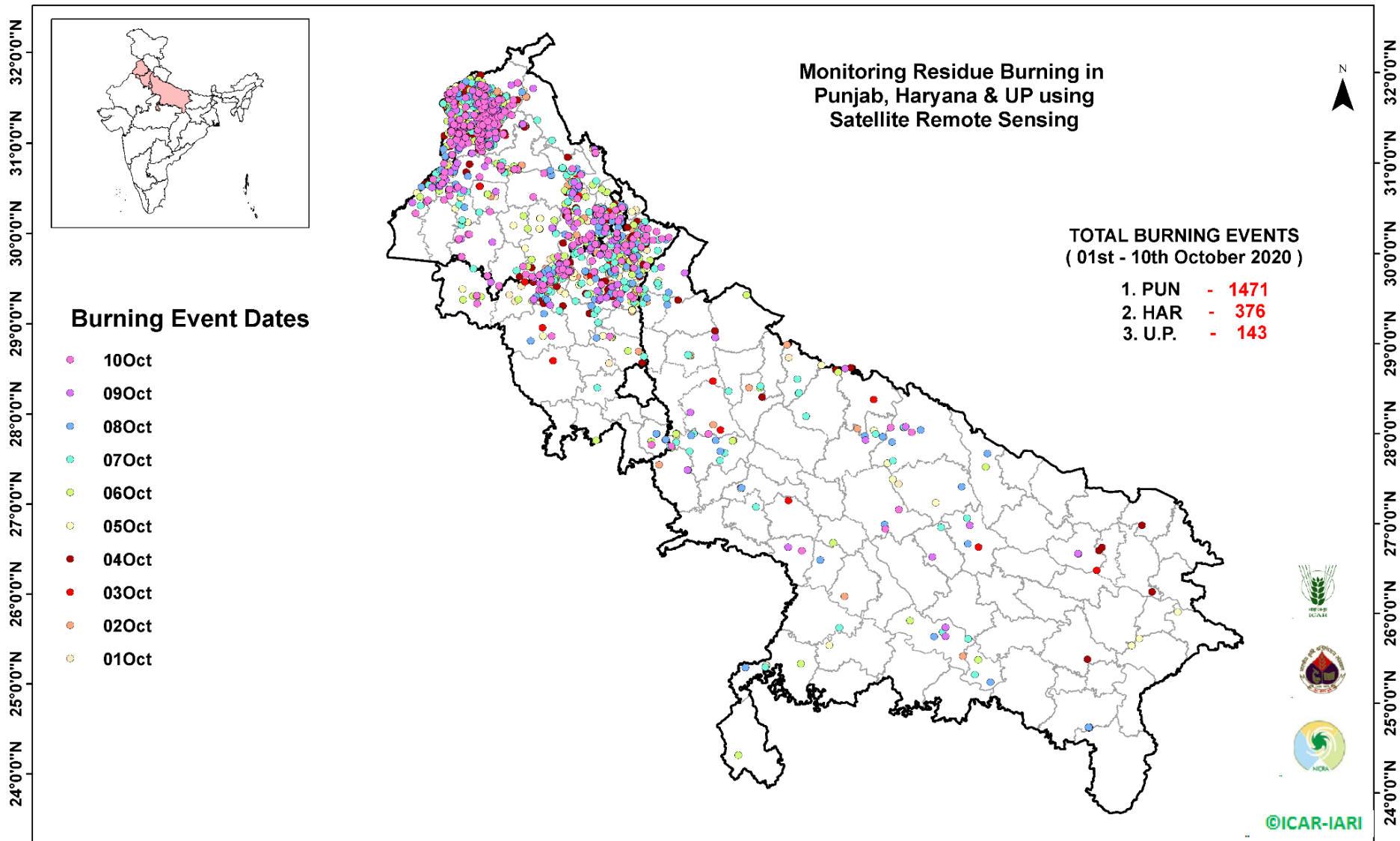
(b) Haryana

Districts	01-10 Oct				
	2016	2017	2018	2019	2020
AMBALA	44	71	35	12	56
BHIWANI	0	2	0	0	1
CHARKHI DADRI	0	0	0	0	0
FARIDABAD	3	8	17	1	0
FATEHABAD	15	36	8	24	29
GURGAON	0	0	0	0	0
HISAR	4	6	6	5	8
JHAJJAR	1	0	3	1	1
JIND	17	39	20	14	15
KAITHAL	217	155	70	83	40
KARNAL	290	312	116	151	72
KURUKSHETRA	162	211	126	99	95
MAHENDRAGARH	0	0	0	1	0
MEWAT	0	0	0	0	0
PALWAL	0	0	0	3	8
PANCHKULA	0	0	3	4	2
PANIPAT	8	17	21	1	0
REWARI	0	0	0	0	1
ROHTAK	0	1	0	0	1
SIRSA	17	6	6	5	11
SONIPAT	0	7	4	0	10
YAMUNANAGAR	10	26	19	16	26
Total	788	897	454	420	376

(C)
Uttar Pradesh

Districts	01-10 Oct																
	2016	2017	2018	2019	2020	GAUTAMBUDHNAGAR	0	0	0	0	1	MUZAFARNAGAR	1	2	1	1	2
AGRA	0	0	0	0	0	GAZIPUR	1	0	1	0	2	PILHIBHIT	5	26	4	4	3
ALIGARH	0	8	6	3	15	GHAZIABAD	0	0	0	0	0	PRATAPGARH	24	61	23	22	0
ALLAHABAD	0	0	3	0	0	GONDA	0	1	2	1	0	RAIBEARELI	0	0	0	0	0
AMBEDKARNAGAR	0	0	0	0	0	GORAKHPUR	0	0	0	0	1	RAMPUR	0	0	0	0	5
AMETHI	0	0	0	0	0	HAMIRPUR	0	0	3	0	1	SAMBHAL	66	55	31	10	3
AMROHA	0	0	0	0	1	HAPUR	0	0	1	0	1	SANTKABIRNAGAR	3	5	4	4	2
AURAIYA	28	25	14	0	1	HARDOI	0	0	0	1	3	SANTRAVIDASNAGAR	0	0	0	1	0
AZAMGARH	0	0	0	0	0	HATHRAS	0	1	2	0	0	SHAHJAHANPUR	0	0	0	0	6
BADAUN	0	0	0	0	0	JALAUN	0	0	0	0	1	SHAMLI	61	148	64	21	8
BAGHPAT	0	0	0	0	0	JAUNPUR	0	0	0	0	1	SHARANPUR	0	0	0	5	9
BAHRAICH	0	0	2	0	2	JHANSI	0	0	2	0	5	SHRAWASTI	0	0	0	0	0
BALLIA	0	0	0	1	1	KANNAUJ	0	0	0	2	1	SIDDHARTHANAGAR	0	0	0	0	0
BALRAMPUR	0	0	0	0	0	KANPUR	0	0	1	0	0	SITAPUR	3	2	1	0	4
BANDA	0	0	1	0	0	KANPUR DEHAT	0	0	0	0	1	SONBHADRA	3	1	3	0	0
BARABANKI	2	11	18	0	4	KASGANJ	0	1	0	0	0	SULTANPUR	0	0	0	0	0
BAREILLY	13	8	4	6	5	KAUSHAMBI	0	0	0	0	3	UNNAO	0	0	0	0	0
BASTI	0	0	0	0	3	KHERI	0	2	6	0	11	VARANASI	0	0	0	0	0
BIJNOR						KUSHINAGAR						JYOTIBAPHULE NAGAR					
	0	0	0	0	2		10	48	17	17	0		0	0	0	0	0
BULANDSAHAR	0	0	1	0	4	LALITPUR	0	0	0	0	1	MAHAMAYANAGAR	0	0	0	0	0
CHANDAULI	0	2	2	1	0	LUCKNOW	0	0	0	0	2	Total	228	431	248	119	143
CHITRAKOOT	0	0	0	0	0	MAHARAJGANJ	2	4	0	1	1						
DEORIA	0	0	0	0	0	MAHOPA	0	0	1	0	0						
ETAH	0	0	0	0	3	MAINPURI	0	0	0	0	1						
ETAWAH	0	1	2	0	2	MATHURA	0	2	2	0	3						
FAIZABAD	0	2	0	0	0	MAU	5	9	23	12	0						
FARRUKHABAD	0	1	0	0	0	MEERUT	0	0	0	0	5						
FATEHPUR	0	0	0	0	7	MIRZAPUR	1	2	0	3	4						
FIROZABAD	0	2	2	0	1	MORADABAD	0	1	1	3	1						

Map of Cumulative Burning Events (01-10 Oct 2020)



[\(http://geoportal.icar.gov.in:8080/geoexplorer/composer/\)](http://geoportal.icar.gov.in:8080/geoexplorer/composer/)

Details of residue burning events in Punjab on 10-Oct-2020

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	AMRITSAR	AJNALA	S-NPP	74.66596	31.68260	14:00:00	D	3.10
2	AMRITSAR	AJNALA	S-NPP	74.65587	31.72200	14:00:00	D	6.20
3	AMRITSAR	AJNALA	AQUA	74.59200	31.75200	14:00:00	D	12.90
4	AMRITSAR	AJNALA	S-NPP	74.59595	31.75206	14:00:00	D	4.10
5	AMRITSAR	AJNALA	S-NPP	74.81010	31.77271	14:00:00	D	3.10
6	AMRITSAR	AJNALA	S-NPP	74.63927	31.79112	14:00:00	D	1.80
7	AMRITSAR	AJNALA	S-NPP	74.58205	31.79923	14:00:00	D	28.00
8	AMRITSAR	AJNALA	AQUA	74.57100	31.80000	14:00:00	D	6.70
9	AMRITSAR	AJNALA	AQUA	74.58400	31.80100	14:00:00	D	14.40
10	AMRITSAR	AJNALA	S-NPP	74.58148	31.80364	14:00:00	D	26.40
11	AMRITSAR	AJNALA	AQUA	74.59600	31.81300	14:00:00	D	10.60
12	AMRITSAR	AJNALA	S-NPP	74.64661	31.81422	14:00:00	D	2.90
13	AMRITSAR	AJNALA	S-NPP	74.59996	31.81879	14:00:00	D	4.20
14	AMRITSAR	AJNALA	S-NPP	74.59940	31.82321	14:00:00	D	5.10
15	AMRITSAR	AJNALA	S-NPP	74.67210	31.85704	14:00:00	D	4.20
16	AMRITSAR	AJNALA	S-NPP	74.75340	31.89854	14:00:00	D	3.60
17	AMRITSAR	AMRITSAR I	AQUA	75.09600	31.54400	14:00:00	D	10.70
18	AMRITSAR	AMRITSAR I	S-NPP	75.00135	31.55561	14:00:00	D	7.10
19	AMRITSAR	AMRITSAR I	S-NPP	75.00608	31.56062	14:00:00	D	4.30
20	AMRITSAR	AMRITSAR I	S-NPP	75.07164	31.59426	14:00:00	D	5.90
21	AMRITSAR	AMRITSAR I	S-NPP	75.03623	31.64229	14:00:00	D	9.10
22	AMRITSAR	AMRITSAR I	S-NPP	75.02396	31.65489	14:00:00	D	6.80
23	AMRITSAR	AMRITSAR I	S-NPP	75.05794	31.68555	14:00:00	D	5.80
24	AMRITSAR	AMRITSAR I	S-NPP	74.98063	31.72033	14:00:00	D	5.00
25	AMRITSAR	AMRITSAR I	S-NPP	74.98591	31.72081	14:00:00	D	5.20
26	AMRITSAR	AMRITSAR I	S-NPP	75.05346	31.74064	14:00:00	D	2.60
27	AMRITSAR	AMRITSAR I	AQUA	74.94100	31.79100	14:00:00	D	13.80
28	AMRITSAR	AMRITSAR I	S-NPP	75.06288	31.79662	14:00:00	D	3.10
29	AMRITSAR	AMRITSAR I	S-NPP	75.04572	31.80419	14:00:00	D	3.20
30	AMRITSAR	AMRITSAR I	AQUA	74.97700	31.82600	14:00:00	D	11.30

31	AMRITSAR	AMRITSAR I	S-NPP	74.98055	31.83130	14:00:00	D	3.40
32	AMRITSAR	AMRITSAR II	S-NPP	74.96345	31.56117	14:00:00	D	2.30
33	AMRITSAR	AMRITSAR II	AQUA	74.81500	31.57300	14:00:00	D	8.30
34	AMRITSAR	AMRITSAR II	S-NPP	74.81480	31.57417	14:00:00	D	5.80
35	AMRITSAR	AMRITSAR II	S-NPP	74.93452	31.58119	14:00:00	D	4.50
36	AMRITSAR	AMRITSAR II	S-NPP	74.63042	31.58665	14:00:00	D	7.40
37	AMRITSAR	AMRITSAR II	S-NPP	74.92822	31.58968	14:00:00	D	4.10
38	AMRITSAR	AMRITSAR II	S-NPP	74.81552	31.67165	14:00:00	D	5.90
39	AMRITSAR	BABA BAKALA	AQUA	75.19100	31.51600	14:00:00	D	7.70
40	AMRITSAR	BABA BAKALA	S-NPP	75.19483	31.51813	14:00:00	D	3.00
41	AMRITSAR	BABA BAKALA	S-NPP	75.11786	31.52507	14:00:00	D	4.70
42	AMRITSAR	BABA BAKALA	S-NPP	75.12321	31.52555	14:00:00	D	7.20
43	AMRITSAR	BABA BAKALA	S-NPP	75.22624	31.53016	14:00:00	D	10.70
44	AMRITSAR	BABA BAKALA	AQUA	75.08300	31.54200	14:00:00	D	10.50
45	AMRITSAR	BABA BAKALA	S-NPP	75.14245	31.54569	14:00:00	D	4.20
46	AMRITSAR	BABA BAKALA	S-NPP	75.20609	31.56071	14:00:00	D	3.30
47	AMRITSAR	BABA BAKALA	S-NPP	75.23757	31.57283	14:00:00	D	4.20
48	AMRITSAR	BABA BAKALA	AQUA	75.27600	31.58400	14:00:00	D	7.20
49	AMRITSAR	BABA BAKALA	AQUA	75.37300	31.61600	14:00:00	D	10.80
50	AMRITSAR	BABA BAKALA	S-NPP	75.15633	31.63476	14:00:00	D	4.70
51	AMRITSAR	BABA BAKALA	S-NPP	75.32191	31.63548	14:00:00	D	3.90
52	AMRITSAR	BABA BAKALA	AQUA	75.14600	31.64100	14:00:00	D	15.70
53	AMRITSAR	BABA BAKALA	S-NPP	75.17144	31.64535	14:00:00	D	7.80
54	AMRITSAR	BABA BAKALA	S-NPP	75.15890	31.70421	14:00:00	D	2.10
55	AMRITSAR	BABA BAKALA	S-NPP	75.15834	31.70877	14:00:00	D	4.00
56	AMRITSAR	BABA BAKALA	S-NPP	75.18080	31.72435	14:00:00	D	5.70
57	AMRITSAR	BABA BAKALA	S-NPP	75.19113	31.72988	14:00:00	D	6.10
58	BATHINDA	BATHINDA	S-NPP	74.78257	30.19606	14:00:00	D	2.90
59	BATHINDA	BATHINDA	S-NPP	74.78712	30.20962	14:00:00	D	8.30
60	BATHINDA	BATHINDA	AQUA	74.90600	30.26300	14:00:00	D	8.20
61	BATHINDA	BATHINDA	AQUA	74.91900	30.26400	14:00:00	D	10.80
62	BATHINDA	RAMPURA PHUL	S-NPP	75.17397	30.52264	14:00:00	D	2.70
63	BATHINDA	TALWANDI SABO	S-NPP	74.82884	30.00953	14:00:00	D	5.70

64	BATHINDA	TALWANDI SABO	S-NPP	74.83369	30.01000	14:00:00	D	20.50
65	BATHINDA	TALWANDI SABO	S-NPP	74.82828	30.01391	14:00:00	D	5.70
66	BATHINDA	TALWANDI SABO	S-NPP	74.83315	30.01439	14:00:00	D	20.50
67	FARIDKOT	FARIDKOT	S-NPP	74.65076	30.68412	14:00:00	D	5.70
68	FARIDKOT	FARIDKOT	S-NPP	74.63890	30.75416	14:00:00	D	15.70
69	FARIDKOT	FARIDKOT	S-NPP	74.64375	30.75463	14:00:00	D	12.90
70	FARIDKOT	FARIDKOT	S-NPP	74.74460	30.78222	14:00:00	D	3.50
71	FARIDKOT	FARIDKOT	S-NPP	74.74956	30.78270	14:00:00	D	3.80
72	FATEHGARH SAHIB	ALMOH	S-NPP	76.16525	30.54177	14:00:00	D	6.80
73	FATEHGARH SAHIB	ALMOH	S-NPP	76.16185	30.54208	14:00:00	D	3.10
74	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.54851	30.56192	14:00:00	D	4.90
75	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.54601	30.56342	14:00:00	D	5.70
76	FAZILKA	JALALABAD	S-NPP	74.22392	30.47424	14:00:00	D	7.60
77	FAZILKA	JALALABAD	S-NPP	74.35693	30.60668	14:00:00	D	16.60
78	FAZILKA	JALALABAD	S-NPP	74.36160	30.60714	14:00:00	D	13.80
79	FAZILKA	JALALABAD	S-NPP	74.37336	30.62572	14:00:00	D	7.60
80	FIROZPUR	FIROZPUR	S-NPP	74.54712	30.82010	14:00:00	D	2.30
81	FIROZPUR	FIROZPUR	S-NPP	74.43204	30.85766	14:00:00	D	6.20
82	FIROZPUR	FIROZPUR	S-NPP	74.56847	30.89326	14:00:00	D	5.20
83	FIROZPUR	FIROZPUR	S-NPP	74.57529	30.94326	14:00:00	D	2.40
84	FIROZPUR	FIROZPUR	S-NPP	74.56512	31.03535	14:00:00	D	2.30
85	FIROZPUR	ZIRA	S-NPP	75.02735	30.90649	14:00:00	D	63.40
86	FIROZPUR	ZIRA	S-NPP	75.30450	30.99237	14:00:00	D	17.90
87	FIROZPUR	ZIRA	S-NPP	75.30363	30.99264	14:00:00	D	17.10
88	FIROZPUR	ZIRA	S-NPP	75.12779	31.08755	14:00:00	D	5.40
89	GURDASPUR	BATALA	AQUA	75.38300	31.69900	14:00:00	D	15.60
90	GURDASPUR	BATALA	S-NPP	75.42447	31.71939	14:00:00	D	9.10
91	GURDASPUR	BATALA	S-NPP	75.23723	31.73935	14:00:00	D	2.60
92	GURDASPUR	BATALA	S-NPP	75.27548	31.76516	14:00:00	D	2.10
93	GURDASPUR	BATALA	S-NPP	75.23647	31.76633	14:00:00	D	1.90
94	GURDASPUR	BATALA	S-NPP	75.42706	31.76916	14:00:00	D	7.10
95	GURDASPUR	BATALA	S-NPP	75.05627	31.87487	14:00:00	D	8.30
96	GURDASPUR	BATALA	S-NPP	75.07186	31.88090	14:00:00	D	8.20

97	GURDASPUR	BATALA	AQUA	75.04500	31.90300	14:00:00	D	24.70
98	GURDASPUR	BATALA	S-NPP	75.04708	31.90620	14:00:00	D	5.40
99	GURDASPUR	BATALA	S-NPP	74.99668	31.91980	14:00:00	D	11.80
100	GURDASPUR	BATALA	S-NPP	74.99506	31.92017	14:00:00	D	5.00
101	GURDASPUR	BATALA	S-NPP	75.00040	31.92065	14:00:00	D	8.50
102	GURDASPUR	GURDASPUR	S-NPP	75.47770	31.95525	14:00:00	D	4.30
103	GURDASPUR	GURDASPUR	S-NPP	75.47631	31.95712	14:00:00	D	6.50
104	JALANDHAR	NAKODAR	AQUA	75.46500	30.99900	14:00:00	D	7.60
105	JALANDHAR	NAKODAR	S-NPP	75.46748	31.00247	14:00:00	D	4.80
106	JALANDHAR	NAKODAR	AQUA	75.50700	31.00300	14:00:00	D	9.20
107	JALANDHAR	NAKODAR	S-NPP	75.46809	31.00328	14:00:00	D	5.00
108	JALANDHAR	SHAHKOT	S-NPP	75.29331	31.03325	14:00:00	D	18.00
109	JALANDHAR	SHAHKOT	S-NPP	75.28738	31.03733	14:00:00	D	12.40
110	JALANDHAR	SHAHKOT	S-NPP	75.29276	31.03782	14:00:00	D	12.40
111	KAPURTHALA	BHOLATH	S-NPP	75.41307	31.59809	14:00:00	D	4.40
112	KAPURTHALA	KAPURTHALA	S-NPP	75.31438	31.38167	14:00:00	D	7.40
113	KAPURTHALA	KAPURTHALA	S-NPP	75.31384	31.38626	14:00:00	D	5.10
114	KAPURTHALA	KAPURTHALA	S-NPP	75.20211	31.40355	14:00:00	D	3.70
115	KAPURTHALA	KAPURTHALA	S-NPP	75.20750	31.40406	14:00:00	D	5.60
116	KAPURTHALA	KAPURTHALA	S-NPP	75.20632	31.40418	14:00:00	D	8.90
117	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.04168	31.18448	14:00:00	D	5.20
118	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.04398	31.18654	14:00:00	D	7.60
119	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.12577	31.25809	14:00:00	D	7.40
120	LUDHIANA	KHANNA	S-NPP	76.28752	30.69711	14:00:00	D	5.60
121	LUDHIANA	LUDHIANA WEST	S-NPP	75.84846	30.96707	14:00:00	D	5.90
122	LUDHIANA	RAIKOT	S-NPP	75.72221	30.70148	14:00:00	D	3.80
123	MANSA	BUDHLADA	S-NPP	75.73492	29.81777	14:00:00	D	2.90
124	MANSA	BUDHLADA	S-NPP	75.65510	29.84285	14:00:00	D	4.70
125	MANSA	BUDHLADA	S-NPP	75.62019	29.92700	14:00:00	D	2.60
126	MANSA	SARDULGARH	S-NPP	75.32353	29.69947	14:00:00	D	1.40
127	MANSA	SARDULGARH	S-NPP	75.32299	29.70397	14:00:00	D	3.50
128	MUKTSAR	MUKTSAR	S-NPP	74.58378	30.63334	14:00:00	D	1.70
129	PATIALA	NABHA	S-NPP	76.29813	30.42378	14:00:00	D	5.40

130	PATIALA	NABHA	AQUA	76.17700	30.48600	14:00:00	D	8.90
131	PATIALA	NABHA	S-NPP	76.17368	30.48994	14:00:00	D	7.80
132	PATIALA	PATIALA	S-NPP	76.34869	30.11873	14:00:00	D	4.00
133	PATIALA	PATIALA	S-NPP	76.34946	30.12000	14:00:00	D	3.00
134	PATIALA	PATIALA	S-NPP	76.54444	30.18908	14:00:00	D	2.50
135	PATIALA	PATIALA	AQUA	76.53000	30.19200	14:00:00	D	23.20
136	PATIALA	PATIALA	S-NPP	76.53097	30.19778	14:00:00	D	3.60
137	PATIALA	PATIALA	S-NPP	76.31937	30.21835	14:00:00	D	4.80
138	PATIALA	PATIALA	S-NPP	76.31708	30.22236	14:00:00	D	9.80
139	PATIALA	PATIALA	S-NPP	76.31885	30.22316	14:00:00	D	6.70
140	PATIALA	PATIALA	S-NPP	76.36375	30.24087	14:00:00	D	5.10
141	PATIALA	PATIALA	S-NPP	76.36547	30.24199	14:00:00	D	5.80
142	PATIALA	PATIALA	S-NPP	76.40633	30.24443	14:00:00	D	3.70
143	PATIALA	PATIALA	S-NPP	76.48443	30.26567	14:00:00	D	12.30
144	PATIALA	PATIALA	S-NPP	76.45136	30.29361	12:18:00	D	4.80
145	PATIALA	RAJPURA	S-NPP	76.66781	30.38034	14:00:00	D	15.80
146	PATIALA	RAJPURA	S-NPP	76.66535	30.38132	14:00:00	D	12.70
147	PATIALA	RAJPURA	S-NPP	76.67570	30.50816	14:00:00	D	7.40
148	PATIALA	RAJPURA	S-NPP	76.74261	30.51473	12:18:00	D	2.90
149	PATIALA	RAJPURA	AQUA	76.54000	30.52400	14:00:00	D	15.10
150	PATIALA	RAJPURA	S-NPP	76.54591	30.52706	14:00:00	D	2.70
151	PATIALA	RAJPURA	S-NPP	76.57736	30.52974	14:00:00	D	5.60
152	PATIALA	RAJPURA	S-NPP	76.59541	30.57733	14:00:00	D	2.80
153	PATIALA	RAJPURA	S-NPP	76.53019	30.59181	14:00:00	D	8.20
154	PATIALA	SAMANA	AQUA	76.14400	29.84300	14:00:00	D	12.30
155	PATIALA	SAMANA	S-NPP	76.09018	29.87918	14:00:00	D	3.50
156	PATIALA	SAMANA	AQUA	76.20000	29.88200	14:00:00	D	15.70
157	PATIALA	SAMANA	S-NPP	76.07602	29.90174	14:00:00	D	9.90
158	PATIALA	SAMANA	S-NPP	76.07892	29.90283	14:00:00	D	7.00
159	PATIALA	SAMANA	S-NPP	76.12735	29.91136	14:00:00	D	6.90
160	PATIALA	SAMANA	S-NPP	76.12456	29.91160	14:00:00	D	6.70
161	PATIALA	SAMANA	S-NPP	76.17514	29.98330	14:00:00	D	8.30
162	PATIALA	SAMANA	S-NPP	76.05991	30.05053	14:00:00	D	11.00

163	PATIALA	SAMANA	S-NPP	76.25077	30.18312	14:00:00	D	17.00
164	RUPNAGAR	ANANDPUR SAHIB	AQUA	76.50300	31.20200	14:00:00	D	10.50
165	RUPNAGAR	ANANDPUR SAHIB	S-NPP	76.50087	31.20929	14:00:00	D	11.90
166	RUPNAGAR	ANANDPUR SAHIB	S-NPP	76.50728	31.20980	14:00:00	D	11.90
167	RUPNAGAR	CHAMKOR SAHIB	S-NPP	76.32272	30.96074	14:00:00	D	5.10
168	SANGRUR	MOONAK	S-NPP	75.97366	29.76201	14:00:00	D	5.60
169	SANGRUR	MOONAK	S-NPP	75.97717	29.78130	14:00:00	D	2.70
170	SANGRUR	MOONAK	S-NPP	75.98021	29.78356	14:00:00	D	5.50
171	SANGRUR	MOONAK	S-NPP	75.83279	29.83629	14:00:00	D	3.80
172	SANGRUR	SANGRUR	AQUA	76.18800	30.28300	14:00:00	D	11.80
173	SAS NAGAR	DERABASSI	S-NPP	76.81912	30.45907	14:00:00	D	8.50
174	SAS NAGAR	DERABASSI	S-NPP	76.78584	30.58038	12:18:00	D	4.30
175	SAS NAGAR	DERABASSI	S-NPP	76.86554	30.60900	14:00:00	D	3.80
176	SBS NAGAR	SBS NAGAR	S-NPP	76.21378	31.02763	14:00:00	D	5.40
177	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03831	31.23160	14:00:00	D	6.40
178	TARN TARAN	KHADOOR SAHIB	S-NPP	75.00068	31.23717	14:00:00	D	4.60
179	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03032	31.25364	14:00:00	D	8.10
180	TARN TARAN	KHADOOR SAHIB	S-NPP	74.99056	31.29223	14:00:00	D	6.80
181	TARN TARAN	KHADOOR SAHIB	S-NPP	74.99579	31.29271	14:00:00	D	12.80
182	TARN TARAN	KHADOOR SAHIB	AQUA	75.02600	31.30400	14:00:00	D	7.90
183	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03130	31.30506	14:00:00	D	3.90
184	TARN TARAN	KHADOOR SAHIB	S-NPP	75.01860	31.32213	14:00:00	D	3.20
185	TARN TARAN	KHADOOR SAHIB	AQUA	74.82500	31.33000	14:00:00	D	25.50
186	TARN TARAN	KHADOOR SAHIB	S-NPP	75.10964	31.36262	14:00:00	D	7.60
187	TARN TARAN	KHADOOR SAHIB	S-NPP	74.79115	31.37581	14:00:00	D	5.00
188	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08095	31.37823	14:00:00	D	1.90
189	TARN TARAN	KHADOOR SAHIB	S-NPP	75.12927	31.37823	14:00:00	D	5.90
190	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03239	31.38273	14:00:00	D	4.60
191	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03093	31.38400	14:00:00	D	5.50
192	TARN TARAN	KHADOOR SAHIB	S-NPP	74.97374	31.38619	14:00:00	D	4.00
193	TARN TARAN	KHADOOR SAHIB	AQUA	74.97500	31.41900	14:00:00	D	15.10
194	TARN TARAN	KHADOOR SAHIB	AQUA	74.98200	31.42000	14:00:00	D	21.20
195	TARN TARAN	KHADOOR SAHIB	AQUA	74.98800	31.42100	14:00:00	D	21.00

196	TARN TARAN	KHADOOR SAHIB	S-NPP	74.98339	31.42526	14:00:00	D	7.60
197	TARN TARAN	KHADOOR SAHIB	S-NPP	74.80263	31.44896	14:00:00	D	6.10
198	TARN TARAN	KHADOOR SAHIB	S-NPP	74.80774	31.44945	14:00:00	D	6.10
199	TARN TARAN	KHADOOR SAHIB	AQUA	74.79900	31.45000	14:00:00	D	10.20
200	TARN TARAN	KHADOOR SAHIB	S-NPP	74.81230	31.45440	14:00:00	D	2.30
201	TARN TARAN	KHADOOR SAHIB	AQUA	74.79700	31.46000	14:00:00	D	12.20
202	TARN TARAN	KHADOOR SAHIB	AQUA	74.87900	31.46000	14:00:00	D	76.80
203	TARN TARAN	KHADOOR SAHIB	AQUA	74.89300	31.46100	14:00:00	D	7.60
204	TARN TARAN	KHADOOR SAHIB	S-NPP	74.88425	31.46133	14:00:00	D	66.20
205	TARN TARAN	KHADOOR SAHIB	S-NPP	75.12276	31.46565	14:00:00	D	9.50
206	TARN TARAN	KHADOOR SAHIB	S-NPP	74.79530	31.46627	14:00:00	D	9.40
207	TARN TARAN	KHADOOR SAHIB	AQUA	75.04400	31.46800	14:00:00	D	12.70
208	TARN TARAN	KHADOOR SAHIB	S-NPP	74.79173	31.46825	14:00:00	D	5.70
209	TARN TARAN	KHADOOR SAHIB	S-NPP	74.79684	31.46871	14:00:00	D	5.70
210	TARN TARAN	KHADOOR SAHIB	S-NPP	74.66837	31.47037	14:00:00	D	2.80
211	TARN TARAN	KHADOOR SAHIB	S-NPP	74.71241	31.47162	14:00:00	D	5.50
212	TARN TARAN	KHADOOR SAHIB	S-NPP	75.04150	31.47177	14:00:00	D	6.40
213	TARN TARAN	KHADOOR SAHIB	S-NPP	74.67158	31.47205	14:00:00	D	3.80
214	TARN TARAN	KHADOOR SAHIB	AQUA	75.02800	31.47700	14:00:00	D	11.90
215	TARN TARAN	KHADOOR SAHIB	S-NPP	75.00876	31.47780	14:00:00	D	6.10
216	TARN TARAN	KHADOOR SAHIB	AQUA	75.04200	31.47800	14:00:00	D	16.50
217	TARN TARAN	KHADOOR SAHIB	S-NPP	75.24065	31.48120	14:00:00	D	4.70
218	TARN TARAN	KHADOOR SAHIB	AQUA	75.23800	31.49000	14:00:00	D	8.60
219	TARN TARAN	KHADOOR SAHIB	S-NPP	75.18977	31.49494	14:00:00	D	4.00
220	TARN TARAN	KHADOOR SAHIB	S-NPP	75.10773	31.51957	14:00:00	D	2.40
221	TARN TARAN	KHADOOR SAHIB	AQUA	74.74100	31.52400	14:00:00	D	7.00
222	TARN TARAN	KHADOOR SAHIB	S-NPP	74.74258	31.53117	14:00:00	D	3.10
223	TARN TARAN	PATTI	S-NPP	74.66208	31.13356	14:00:00	D	3.30
224	TARN TARAN	PATTI	S-NPP	74.66702	31.13405	14:00:00	D	3.30
225	TARN TARAN	PATTI	S-NPP	74.66151	31.13796	14:00:00	D	8.40
226	TARN TARAN	PATTI	S-NPP	74.66354	31.13803	14:00:00	D	10.30
227	TARN TARAN	PATTI	S-NPP	74.65995	31.24465	14:00:00	D	2.70
228	TARN TARAN	PATTI	S-NPP	74.77913	31.26544	14:00:00	D	3.40

229	TARN TARAN	PATTI	S-NPP	74.86709	31.27639	14:00:00	D	3.10
230	TARN TARAN	PATTI	S-NPP	74.63226	31.27684	14:00:00	D	3.00
231	TARN TARAN	PATTI	S-NPP	74.71433	31.30700	14:00:00	D	3.10
232	TARN TARAN	PATTI	S-NPP	74.82912	31.33148	14:00:00	D	13.90
233	TARN TARAN	PATTI	AQUA	74.73700	31.37100	14:00:00	D	7.70
234	TARN TARAN	PATTI	S-NPP	74.74039	31.37112	14:00:00	D	2.20
235	TARN TARAN	PATTI	S-NPP	74.73676	31.37194	14:00:00	D	3.30
236	TARN TARAN	PATTI	S-NPP	74.63769	31.37940	14:00:00	D	4.50
237	TARN TARAN	PATTI	S-NPP	74.65654	31.39012	14:00:00	D	3.00
238	TARN TARAN	PATTI	S-NPP	74.64043	31.39751	14:00:00	D	2.50

Details of residue burning events in Haryana on 10-Oct-2020

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	AMBALA	AMBALA	S-NPP	76.64268	30.16101	14:00:00	D	3.40
2	AMBALA	AMBALA	S-NPP	76.64183	30.16265	14:00:00	D	7.00
3	AMBALA	AMBALA	S-NPP	76.80944	30.27650	14:00:00	D	8.60
4	AMBALA	AMBALA	S-NPP	76.80793	30.27733	14:00:00	D	22.70
5	AMBALA	AMBALA	S-NPP	76.80892	30.28147	14:00:00	D	8.60
6	AMBALA	AMBALA	AQUA	76.80500	30.32200	14:00:00	D	10.10
7	AMBALA	AMBALA	S-NPP	76.80265	30.32701	14:00:00	D	22.10
8	AMBALA	BARARA	S-NPP	76.99776	30.19872	12:18:00	D	3.70
9	AMBALA	BARARA	S-NPP	77.01487	30.26886	14:00:00	D	13.90
10	AMBALA	BARARA	AQUA	77.06500	30.31500	14:00:00	D	10.80
11	AMBALA	NARAYANGARH	S-NPP	77.15688	30.37622	12:18:00	D	5.20
12	FATEHABAD	TOHANA	S-NPP	75.86201	29.66926	14:00:00	D	9.90
13	FATEHABAD	TOHANA	S-NPP	75.86752	29.66978	14:00:00	D	8.70
14	FATEHABAD	TOHANA	S-NPP	75.86565	29.67184	14:00:00	D	9.90
15	FATEHABAD	TOHANA	S-NPP	75.83197	29.67351	14:00:00	D	3.30
16	FATEHABAD	TOHANA	S-NPP	75.86699	29.67444	14:00:00	D	8.70
17	FATEHABAD	TOHANA	S-NPP	75.89786	29.68415	14:00:00	D	6.20
18	FATEHABAD	TOHANA	S-NPP	75.88130	29.72976	14:00:00	D	5.10
19	HISAR	HANSI	S-NPP	76.00996	29.16467	14:00:00	D	2.70
20	KAITHAL	GUHLA	S-NPP	76.20612	29.88986	14:00:00	D	6.30
21	KAITHAL	KAITHAL	S-NPP	76.62368	29.75238	14:00:00	D	16.40
22	KAITHAL	KAITHAL	AQUA	76.52800	29.88400	14:00:00	D	10.30
23	KAITHAL	KAITHAL	S-NPP	76.52614	29.88938	14:00:00	D	4.60
24	KARNAL	GHARAUNDA	S-NPP	76.82516	29.54332	14:00:00	D	5.30
25	KARNAL	GHARAUNDA	S-NPP	77.03180	29.60568	14:00:00	D	5.40
26	KARNAL	INDRI	S-NPP	77.03252	29.94284	14:00:00	D	3.00
27	KARNAL	KARNAL	S-NPP	76.99619	29.63286	14:00:00	D	2.10
28	KARNAL	KARNAL	S-NPP	76.80721	29.65125	14:00:00	D	7.40
29	KARNAL	KARNAL	S-NPP	76.80545	29.65240	14:00:00	D	8.90
30	KARNAL	KARNAL	S-NPP	76.87054	29.65692	14:00:00	D	7.20

31	KARNAL	KARNAL	S-NPP	77.10620	29.70240	14:00:00	D	8.30
32	KURUKSHETRA	PEHOWA	S-NPP	76.49783	30.01227	14:00:00	D	8.70
33	KURUKSHETRA	PEHOWA	S-NPP	76.70564	30.10692	14:00:00	D	3.60
34	KURUKSHETRA	SHAHABAD	S-NPP	76.81239	30.13094	14:00:00	D	3.30
35	KURUKSHETRA	SHAHABAD	S-NPP	76.89996	30.16350	14:00:00	D	6.70
36	KURUKSHETRA	SHAHABAD	S-NPP	76.90032	30.16354	14:00:00	D	4.30
37	KURUKSHETRA	SHAHABAD	S-NPP	76.91630	30.19501	14:00:00	D	4.30
38	KURUKSHETRA	SHAHABAD	S-NPP	76.91670	30.19518	14:00:00	D	6.20
39	KURUKSHETRA	THANESAR	S-NPP	76.78685	29.92190	14:00:00	D	6.40
40	KURUKSHETRA	THANESAR	AQUA	76.78300	29.92200	14:00:00	D	33.20
41	KURUKSHETRA	THANESAR	S-NPP	76.79321	29.92245	14:00:00	D	6.90
42	KURUKSHETRA	THANESAR	S-NPP	76.87111	30.01972	14:00:00	D	3.30
43	KURUKSHETRA	THANESAR	S-NPP	77.02718	30.03784	14:00:00	D	4.70
44	KURUKSHETRA	THANESAR	AQUA	77.01300	30.06000	14:00:00	D	12.20
45	KURUKSHETRA	THANESAR	S-NPP	77.01801	30.06238	14:00:00	D	6.60
46	KURUKSHETRA	THANESAR	S-NPP	76.70200	30.08176	14:00:00	D	2.90
47	PALWAL	HODAL	S-NPP	77.30021	27.98164	14:00:00	D	5.30
48	PALWAL	HODAL	S-NPP	77.29869	27.98187	14:00:00	D	3.60
49	SIRSA	SIRSA	S-NPP	75.05067	29.49916	14:00:00	D	2.60
50	SIRSA	SIRSA	S-NPP	75.04505	29.58356	14:00:00	D	4.00
51	SIRSA	SIRSA	S-NPP	75.04241	29.58645	14:00:00	D	16.30
52	SIRSA	SIRSA	S-NPP	75.04449	29.58798	14:00:00	D	7.50
53	SIRSA	SIRSA	S-NPP	75.16816	29.80874	14:00:00	D	4.10
54	SIRSA	SIRSA	S-NPP	75.16957	29.81117	14:00:00	D	4.40
55	SONIPAT	GOHANA	S-NPP	76.74570	29.17768	14:00:00	D	3.80
56	YAMUNANAGAR	CHHACHHRAULII	S-NPP	77.38046	30.27313	14:00:00	D	2.40
57	YAMUNANAGAR	CHHACHHRAULII	S-NPP	77.47088	30.29072	14:00:00	D	4.00
58	YAMUNANAGAR	JAGADHRI	S-NPP	77.19252	29.97157	14:00:00	D	1.80
59	YAMUNANAGAR	JAGADHRI	S-NPP	77.11776	30.17183	14:00:00	D	4.80
60	YAMUNANAGAR	JAGADHRI	S-NPP	77.12059	30.17716	14:00:00	D	2.90
61	YAMUNANAGAR	JAGADHRI	S-NPP	77.27035	30.25401	14:00:00	D	7.10
62	YAMUNANAGAR	JAGADHRI	S-NPP	77.14933	30.25962	14:00:00	D	1.40
63	YAMUNANAGAR	JAGADHRI	S-NPP	77.18156	30.30169	14:00:00	D	2.30

64	YAMUNANAGAR	JAGADHRI	S-NPP	77.31134	30.35296	14:00:00	D	3.90
65	YAMUNANAGAR	JAGADHRI	S-NPP	77.19756	30.37989	14:00:00	D	1.90

Details of residue burning events in Uttar Pradesh on 10-Oct-2020

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	ALIGARH	KHAIR	S-NPP	77.54839	27.97330	14:00:00	D	3.70
2	BULANSAHAR	KHURJA	S-NPP	78.01300	28.11364	14:00:00	D	1.70
3	ETAHWAH	BHARTHNA	S-NPP	79.19254	26.82322	02:42:00	N	1.00
4	HARDOI	BILGRAM	S-NPP	80.23148	27.06909	01:06:00	N	0.80
5	HARDOI	SANDILA	S-NPP	80.39878	27.28362	01:06:00	N	0.50
6	KHERI	GOLA	TERRA	80.56200	28.14500	10:45:00	D	8.40
7	KHERI	GOLA	S-NPP	80.29975	28.19793	14:00:00	D	4.40

The study used images received from following Satellites at IARI Satellite 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
4.	NOAA – 18	AVHRR	1000	Night
5.	NOAA – 19	AVHRR	1000	Night
6.	Metop - 1	AVHRR	1000	Night
7.	Metop - 2	AVHRR	1000	Night

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Softcopy of this report and latest statistics can be seen on <http://creams.iari.res.in>

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)
