

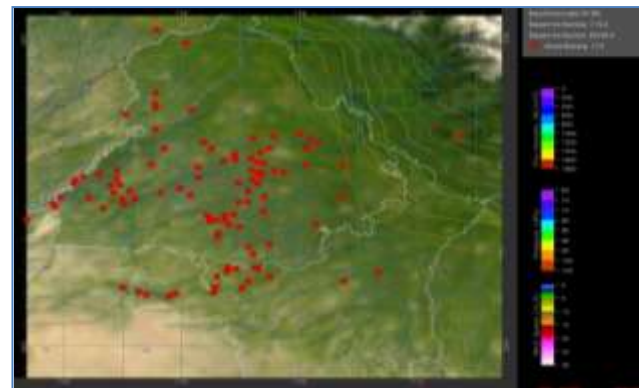
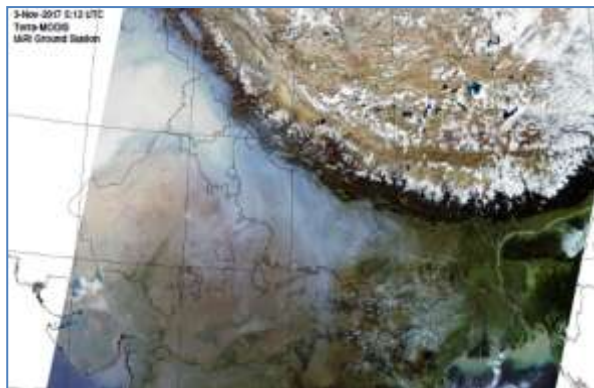


# MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2020

**Bulletin  
No. 12**

**Events Date:  
12-Oct-2020**

**Issued on:  
13-Oct-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**

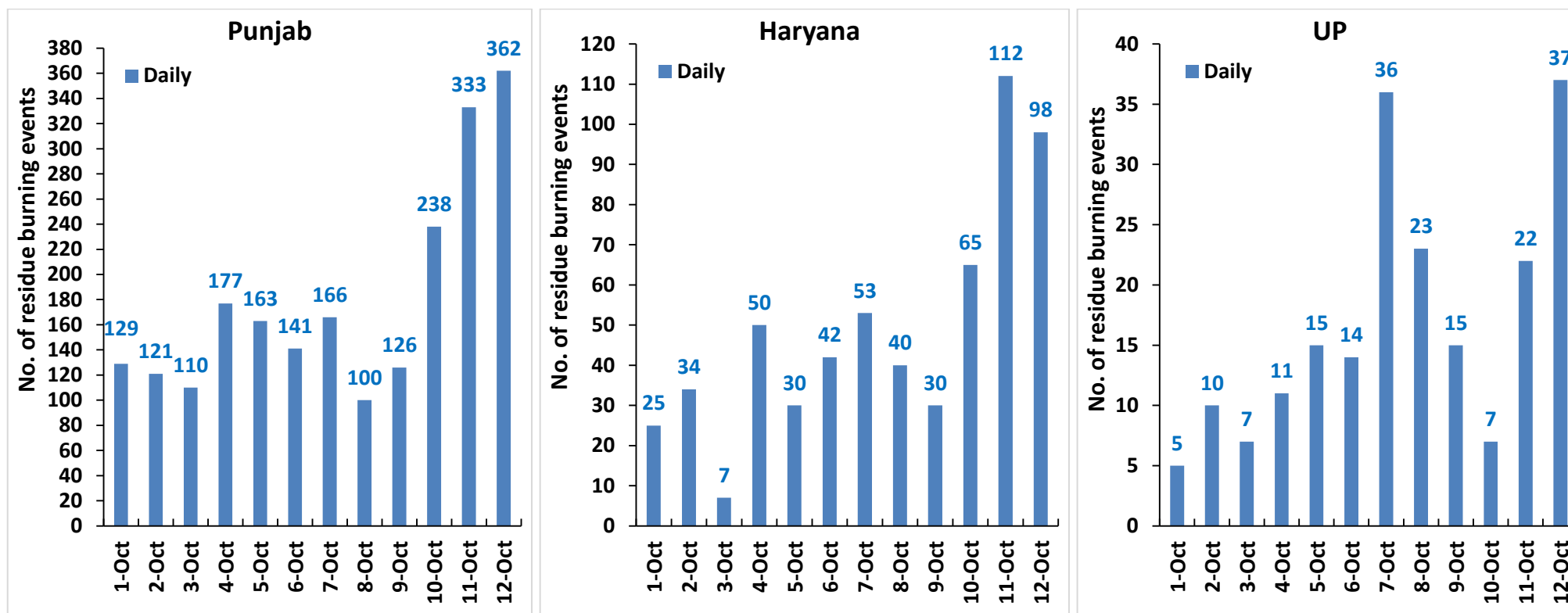
<http://creams.iari.res.in>



## Highlights for 12-October-2020

- Satellites detected **497** residue burning events in the three study States on **12-Oct-2020**.
- The state wise events detected on **12-Oct-2020** were **362** in Punjab, **98** in Haryana and **37** in UP.
- The number of events has increased from **467** on **11-Oct-2020** to **497** on **12-Oct-2020** in the three states.
- Total **2954** burning events were detected in the three States between **01-Oct-2020** and **12-Oct-2020**, which are distributed as **2166**, **586** and **202** in Punjab, Haryana and UP, respectively.
- Amritsar, Tarn Taran and Patiala in Punjab; Kurukshetra, Karnal and Ambala in Haryana; and Aligarh, Kheri and Rampur in UP were the top three districts with burning events during **1-Oct to 12-Oct 2020**
- In Punjab, the cumulative number of burning events between **1-Oct** and **12-Oct 2020** were higher than in **2019**.

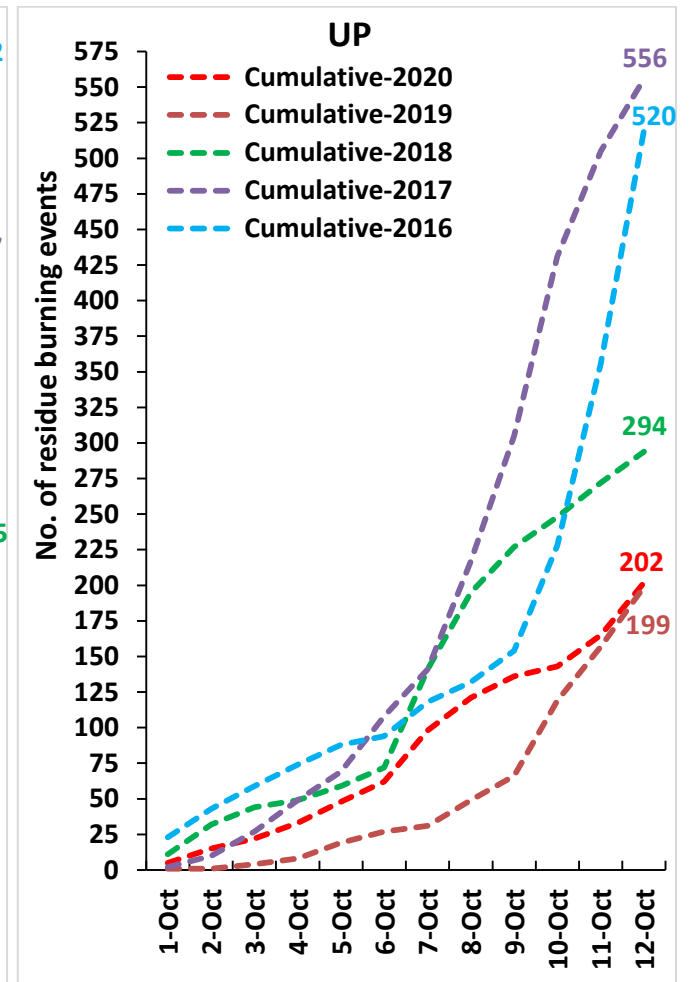
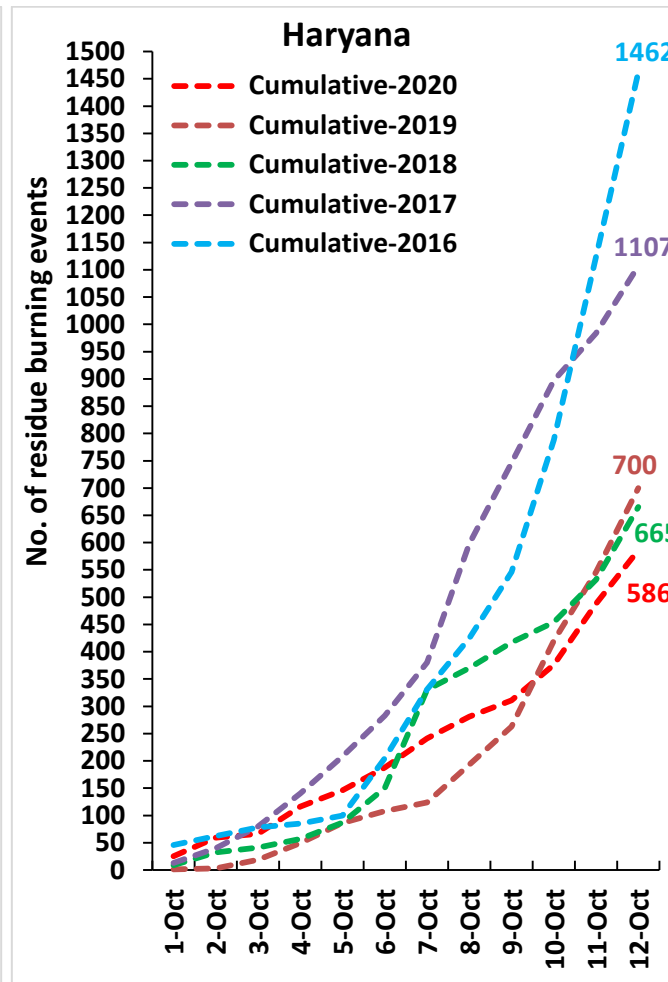
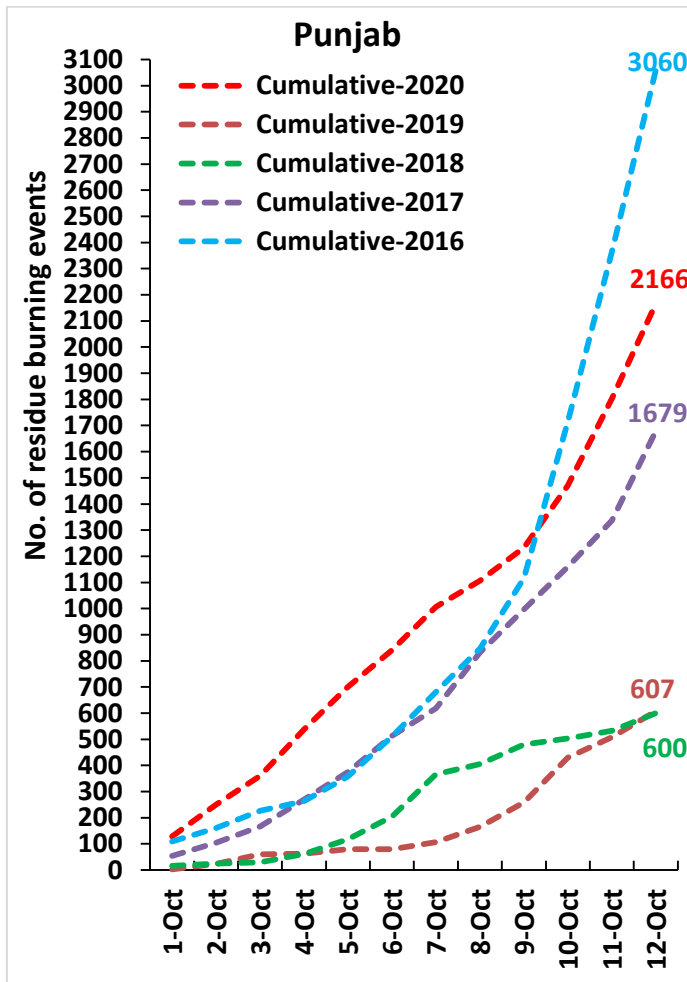
### Temporal distribution of residue burning events for the three study States in 2020



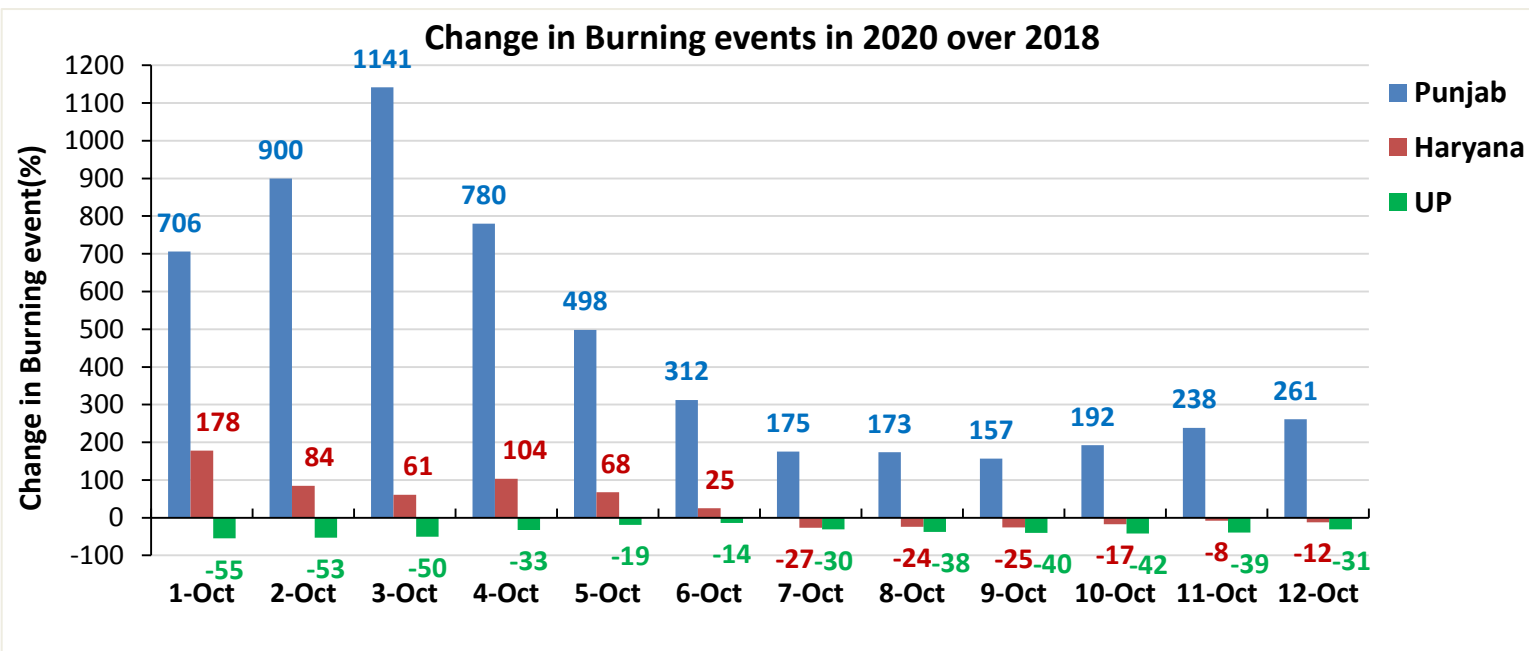
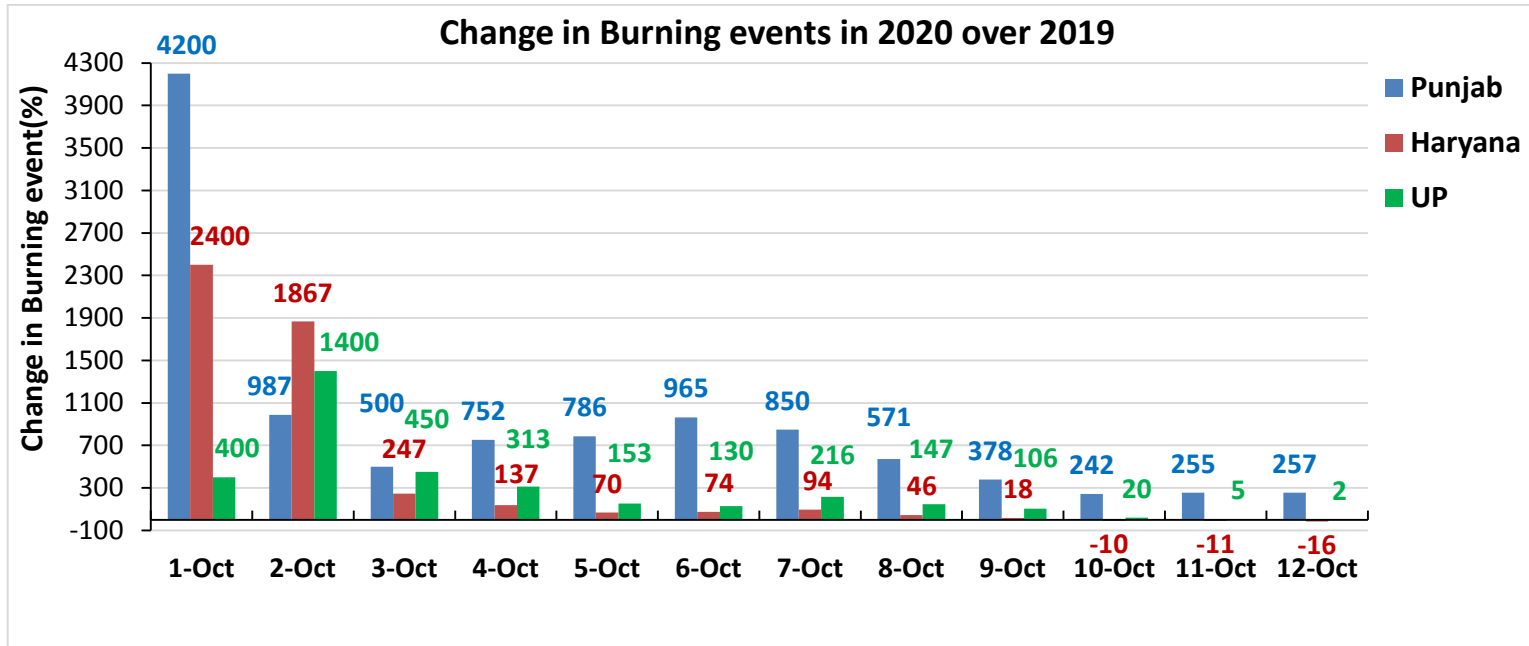
**Comparison of residue burning events in current year (2020) with previous years (2019, 2018, 2017 & 2016) for the three study**

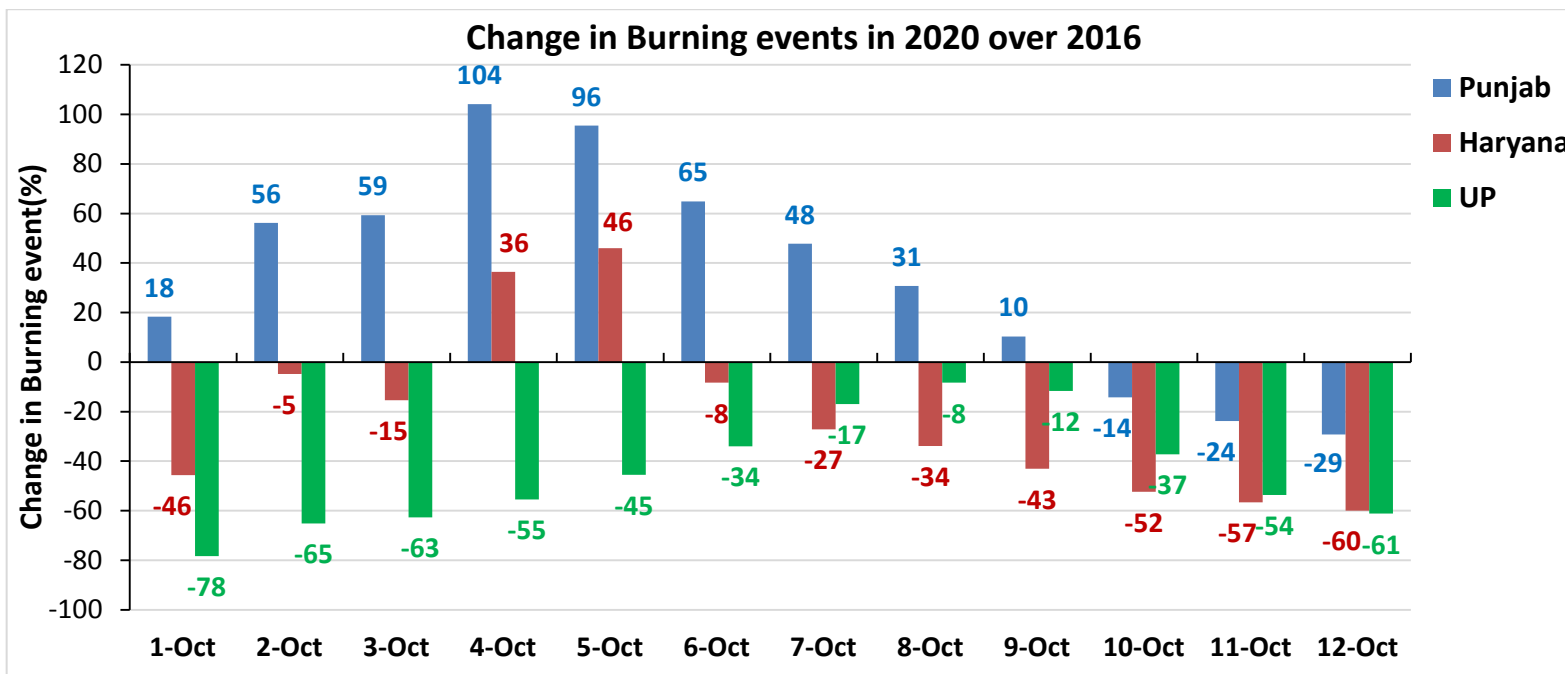
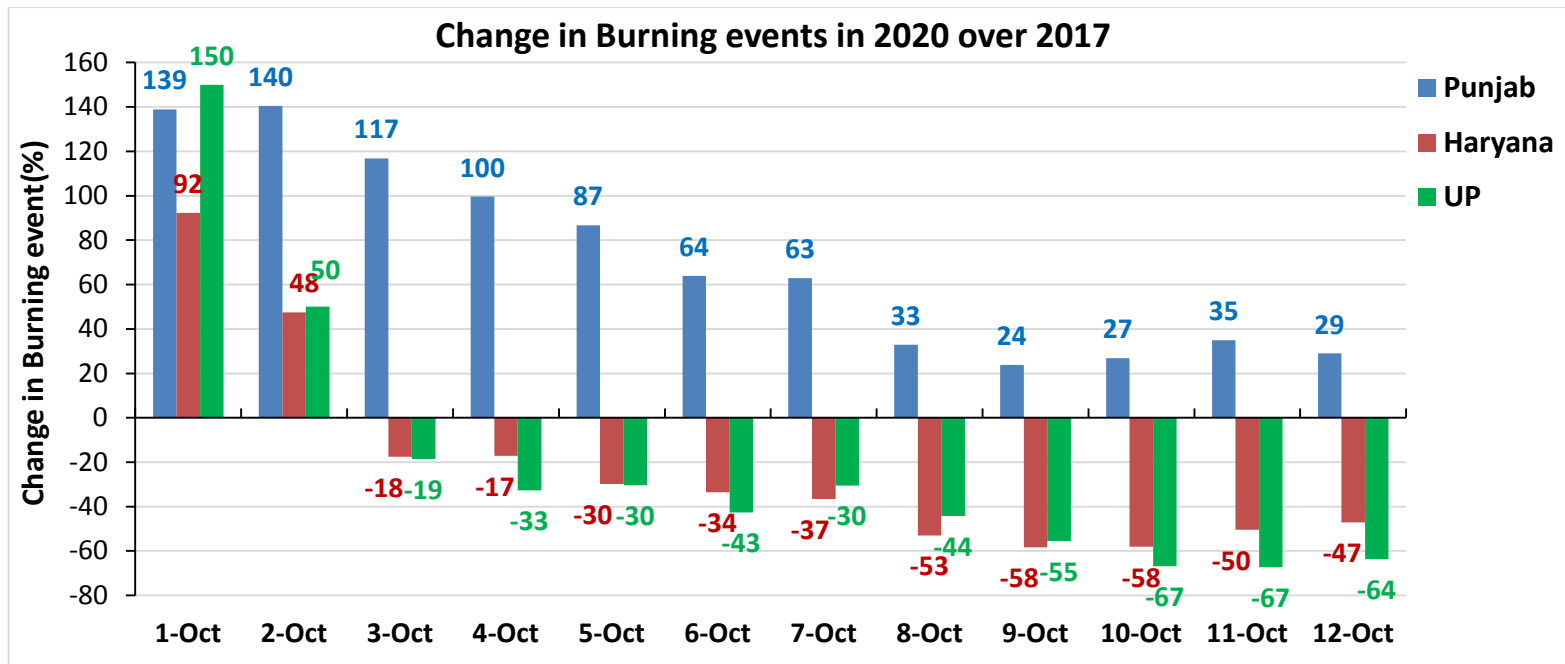
**States**

**(01-Oct to 12-Oct)**



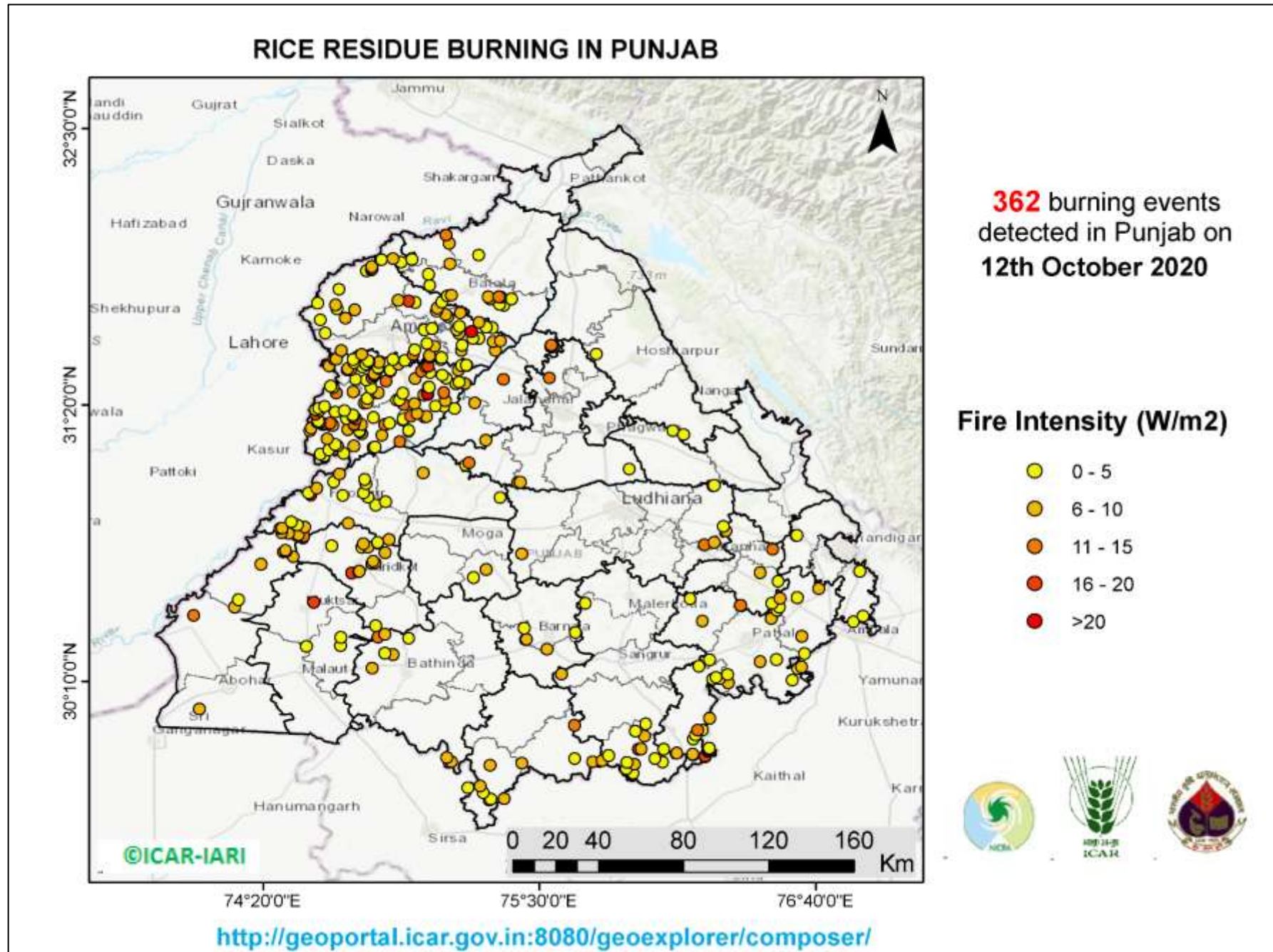
**Percent Change in Burning events in 2020 over 2019, 2018, 2017 and 2016 (Daily Cumulative)**



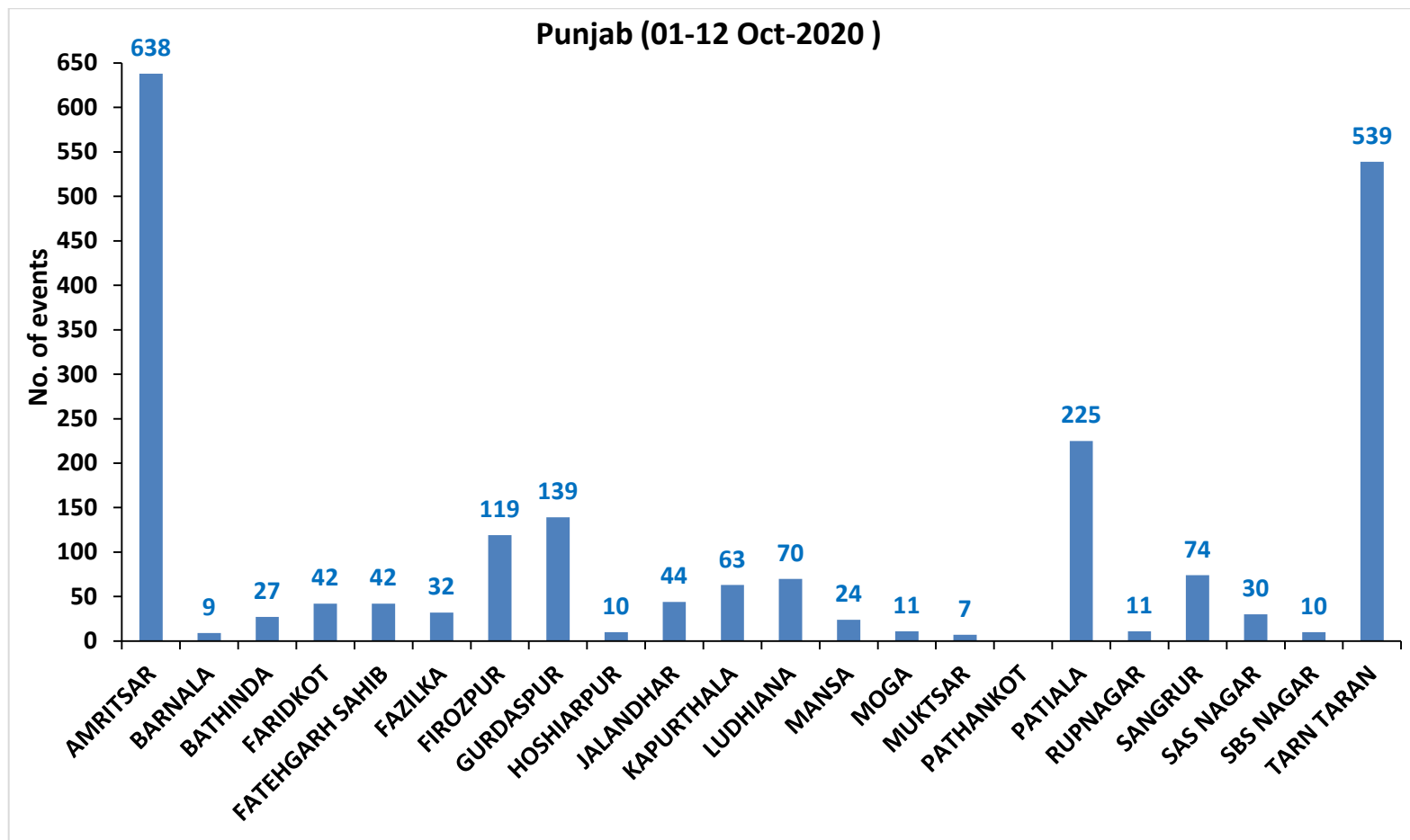




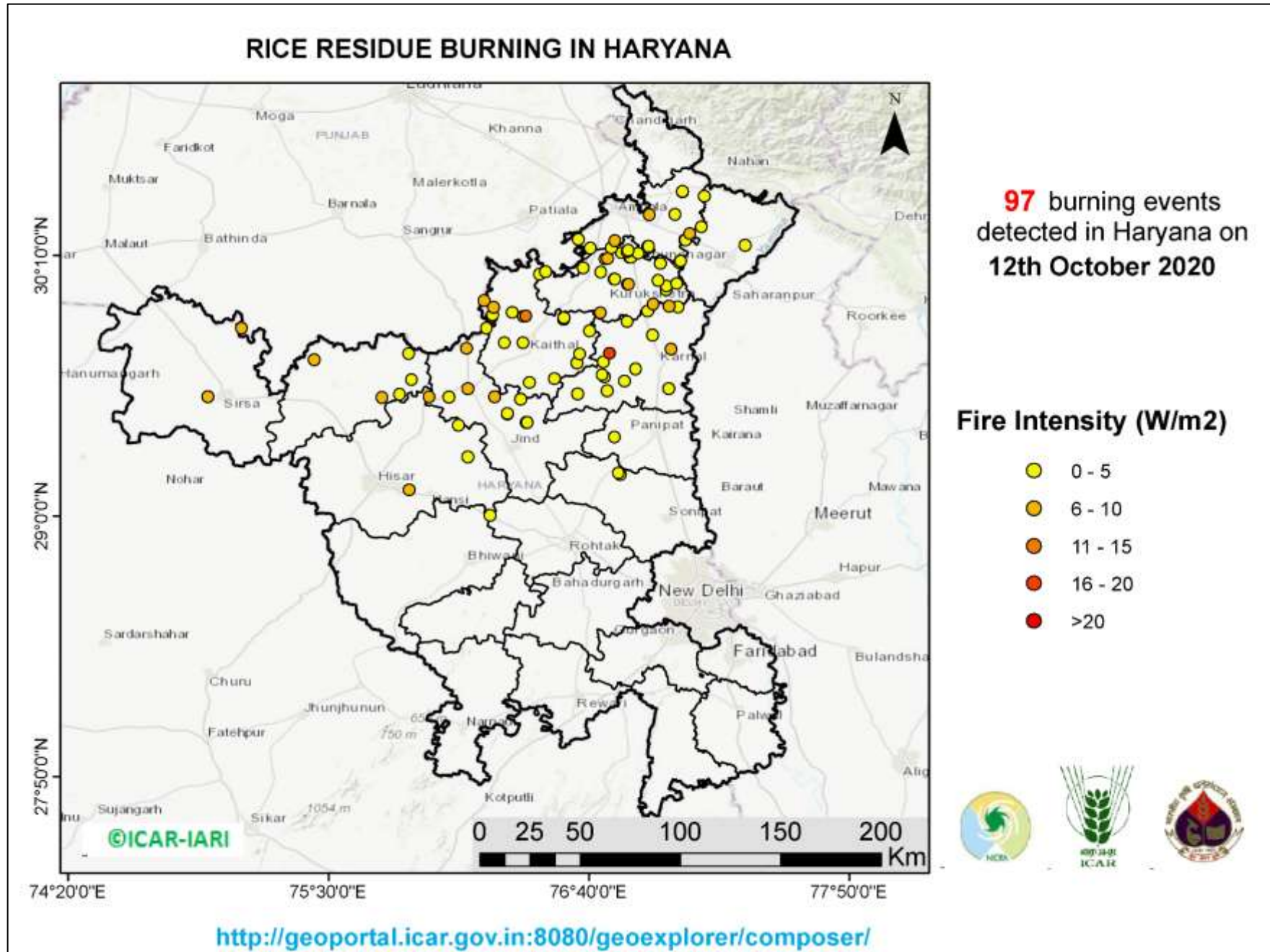
(a) Punjab



**District-wise cumulative number of residue burning events in Punjab (01-12 Oct-2020)**

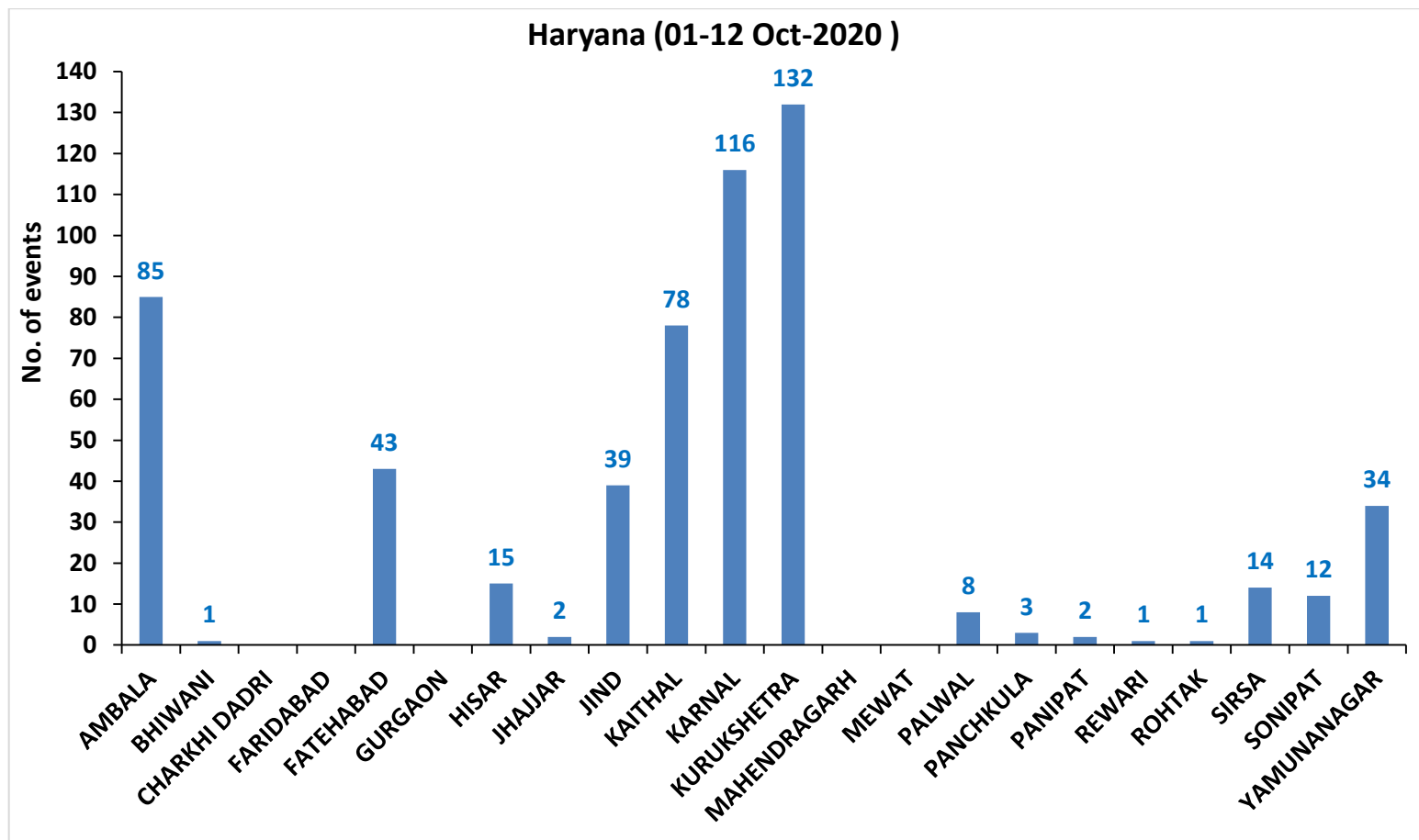


(b) Haryana



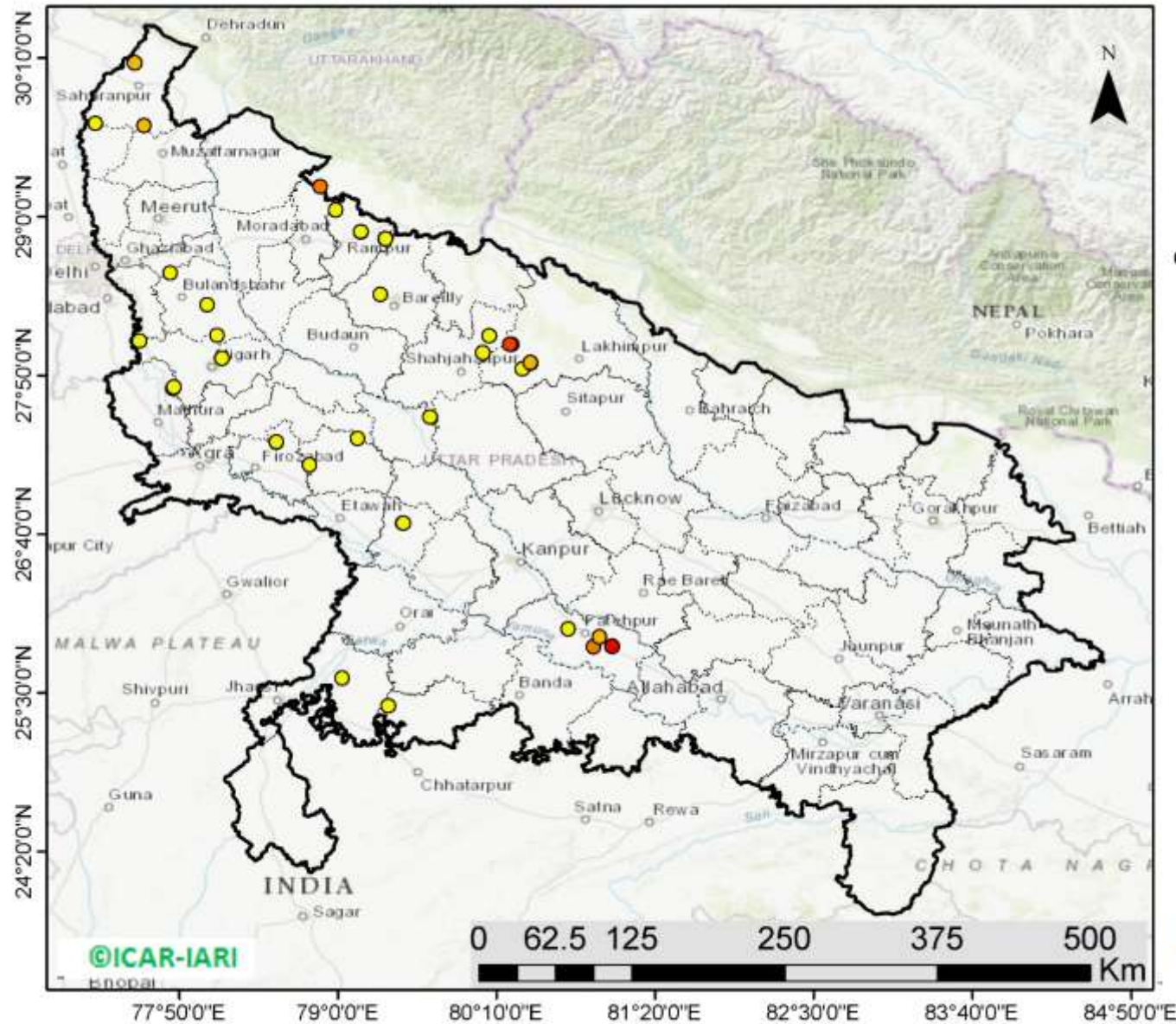


**District-wise cumulative number of residue burning events in Haryana (01-12 Oct-2020)**



(c) Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



**37** burning events detected in Uttar Pradesh on 12th October 2020

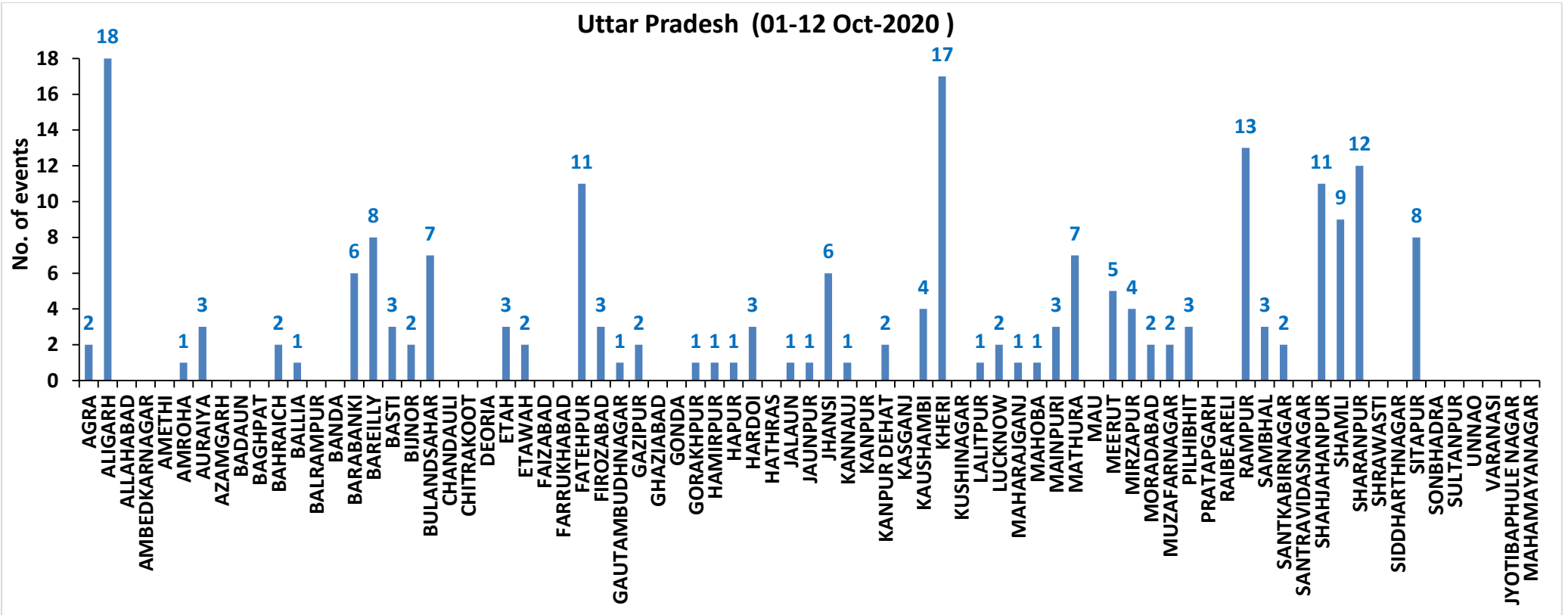
Fire Intensity (W/m<sup>2</sup>)

- 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 (01-12 Oct-2020)**



**State-wise and date-wise number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020**  
**(Period: 01-12 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
11-Oct	333	78	30	177	652	112	126	78	87	336	22	38	24	74	128	467	242	132	338	1116
12-Oct	362	99	67	342	694	98	154	133	123	338	37	42	22	51	164	497	295	222	516	1196
<b>Total</b>	<b>2166</b>	<b>607</b>	<b>600</b>	<b>1679</b>	<b>3060</b>	<b>586</b>	<b>700</b>	<b>665</b>	<b>1107</b>	<b>1462</b>	<b>202</b>	<b>199</b>	<b>294</b>	<b>556</b>	<b>520</b>	<b>2954</b>	<b>1506</b>	<b>1559</b>	<b>3342</b>	<b>5042</b>

**District-wise and date wise cumulative number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020**  
**(Period: 01-12 October)**

**(a) Punjab**

Districts	01-12 Oct				
	2016	2017	2018	2019	2020
AMRITSAR	569	345	300	230	638
BARNALA	11	6	1	0	9
BATHINDA	132	67	12	3	27
FARIDKOT	192	241	5	7	42
FATEHGARH SAHIB	174	50	9	4	42
FAZILKA	0	0	0	7	32
FIROZPUR	240	165	29	19	119
GURDASPUR	134	34	26	19	139
HOSHIARPUR	25	4	3	6	10
JALANDHAR	199	82	1	23	44
KAPURTHALA	165	20	2	19	63
LUDHIANA	127	99	19	6	70
MANSA	12	25	3	12	24
MOGA	47	17	0	7	11
MUKTSAR	193	21	3	4	7
PATHANKOT	0	0	0	0	0
PATIALA	255	198	48	80	225
RUPNAGAR	23	2	0	0	11
SANGRUR	49	75	29	24	74
SAS NAGAR	26	22	17	5	30
SBS NAGAR	35	15	8	10	10
TARN TARAN	452	191	85	122	539
<b>Total</b>	<b>3060</b>	<b>1679</b>	<b>600</b>	<b>607</b>	<b>2166</b>

**(b) Haryana**

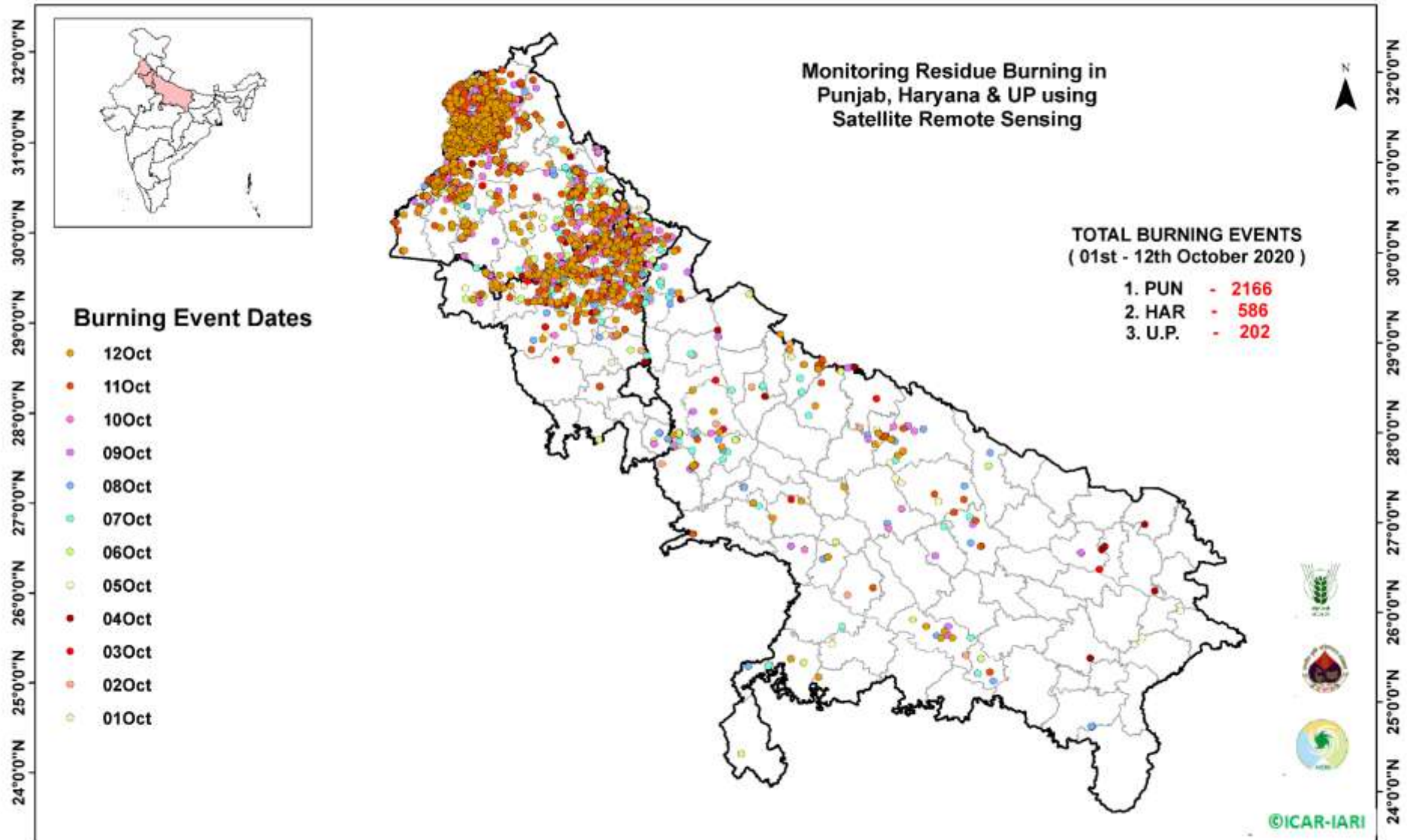
Districts	01-12 Oct				
	2016	2017	2018	2019	2020
AMBALA	89	88	36	26	85
BHIWANI	0	2	1	0	1
CHARKHI DADRI	0	0	0	0	0
FARIDABAD	4	9	20	1	0
FATEHABAD	40	45	20	31	43
GURGAON	0	0	0	0	0
HISAR	10	11	7	10	15
JHAJJAR	4	0	3	1	2
JIND	28	53	34	25	39
KAITHAL	405	213	128	165	78
KARNAL	519	373	204	246	116
KURUKSHETRA	297	245	149	155	132
MAHENDRAGARH	0	0	0	1	0
MEWAT	0	0	0	0	0
PALWAL	0	0	0	4	8
PANCHKULA	0	0	3	5	3
PANIPAT	12	18	29	4	2
REWARI	0	0	0	0	1
ROHTAK	1	1	0	0	1
SIRSA	28	11	7	6	14
SONIPAT	1	7	5	0	12
YAMUNANAGAR	24	31	19	20	34
<b>Total</b>	<b>1462</b>	<b>1107</b>	<b>665</b>	<b>700</b>	<b>586</b>



**(C)**  
**Uttar Pradesh**

Districts	01-12 Oct																
	2016	2017	2018	2019	2020	GAUTAMBUDHNAGAR	1	0	1	0	1	MUZAFARNAGAR	11	27	7	4	2
AGRA	0	0	0	0	2	GAZIPUR	0	0	0	0	2	PILHIBHIT	86	87	28	50	3
ALIGARH	0	8	7	7	18	GHAZIABAD	2	1	2	1	0	PRATAPGARH	0	0	0	0	0
ALLAHABAD	0	0	3	0	0	GONDA	0	0	0	0	0	RAIBEARELI	0	0	0	0	0
AMBEDKARNAGAR	0	1	0	0	0	GORAKHPUR	0	0	3	0	1	RAMPUR	119	73	31	16	13
AMETHI	0	0	0	0	0	HAMIRPUR	0	0	1	0	1	SAMBHAL	0	0	0	1	3
AMROHA	0	0	0	0	1	HAPUR	0	0	0	2	1	SANTKABIRNAGAR	0	0	0	0	2
AURAIYA	32	31	14	0	3	HARDOI	1	2	2	0	3	SANTRAVIDASNAGAR	0	0	0	0	0
AZAMGARH	0	0	0	0	0	HATHRAS	0	0	0	0	0	SHAHJAHANPUR	153	193	69	29	11
BADAUN	0	0	0	0	0	JALAUN	0	0	0	0	1	SHAMLI	0	0	0	8	9
BAGHPAT	0	0	0	2	0	JAUNPUR	0	0	2	0	1	SHARANPUR	7	7	6	4	12
BAHRAICH	0	0	2	0	2	JHANSI	0	0	0	2	6	SHRAWASTI	0	0	0	0	0
BALLIA	0	0	0	1	1	KANNAUJ	0	0	1	0	1	SIDDHARTHANAGAR	0	0	0	0	0
BALRAMPUR	0	0	0	0	0	KANPUR	0	0	0	0	0	SITAPUR	5	4	1	2	8
BANDA	0	0	1	0	0	KANPUR DEHAT	0	1	0	0	2	SONBHADRA	3	1	4	0	0
BARABANKI	8	13	24	1	6	KASGANJ	0	0	0	0	0	SULTANPUR	0	0	0	0	0
BAREILLY	26	16	4	7	8	KAUSHAMBI	0	2	6	0	4	UNNAO	3	0	0	1	0
BASTI	0	0	0	0	3	KHERI	48	57	21	29	17	VARANASI	0	0	0	0	0
BIJNOR	1	0	1	0	2	KUSHINAGAR	0	1	0	0	0	JYOTIBAPHULE NAGAR	0	0	1	0	0
BULANDSAHAR	0	2	2	3	7	LALITPUR	0	0	0	0	1	MAHAMAYANAGAR	0	0	1	0	0
CHANDAULI	0	0	0	0	0	LUCKNOW	2	4	0	1	2	<b>Total</b>	<b>520</b>	<b>556</b>	<b>294</b>	<b>199</b>	<b>202</b>
CHITRAKOOT	0	0	0	0	0	MAHARAJGANJ	0	1	1	0	1						
DEORIA	0	0	0	0	0	MAHOBA	0	0	0	0	1						
ETAH	0	1	2	0	3	MAINPURI	0	2	4	1	3						
ETAWAH	0	2	0	0	2	MATHURA	8	10	38	19	7						
FAIZABAD	0	1	0	0	0	MAU	0	0	0	0	0						
FARRUKHABAD	0	0	0	0	0	MEERUT	3	2	0	4	5						
FATEHPUR	0	2	2	0	11	MIRZAPUR	0	1	1	3	4						
FIROZABAD	0	0	0	0	3	MORADABAD	1	3	1	1	2						

### Map of Cumulative Burning Events (01-12 Oct 2020)



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

**Details of residue burning events in Punjab on 12-Oct-2020**

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	AMRITSAR	AJNALA	S-NPP	74.59722	31.63607	13:24:00	D	3.20
2	AMRITSAR	AJNALA	S-NPP	74.57623	31.69167	13:24:00	D	1.60
3	AMRITSAR	AJNALA	S-NPP	74.68168	31.69903	13:24:00	D	5.10
4	AMRITSAR	AJNALA	S-NPP	74.72249	31.73404	13:24:00	D	6.00
5	AMRITSAR	AJNALA	S-NPP	74.64578	31.73869	13:24:00	D	4.30
6	AMRITSAR	AJNALA	AQUA	74.64000	31.75600	13:45:00	D	5.50
7	AMRITSAR	AJNALA	S-NPP	74.56506	31.76354	13:24:00	D	1.90
8	AMRITSAR	AJNALA	AQUA	74.90500	31.77500	13:45:00	D	6.00
9	AMRITSAR	AJNALA	S-NPP	74.65449	31.82102	13:24:00	D	4.50
10	AMRITSAR	AJNALA	S-NPP	74.77012	31.90006	13:24:00	D	3.90
11	AMRITSAR	AJNALA	S-NPP	74.79138	31.90366	13:24:00	D	2.30
12	AMRITSAR	AJNALA	S-NPP	74.79486	31.90775	13:24:00	D	9.10
13	AMRITSAR	AJNALA	S-NPP	74.79255	31.91786	13:24:00	D	6.70
14	AMRITSAR	AJNALA	S-NPP	74.83037	31.94521	13:24:00	D	4.10
15	AMRITSAR	AJNALA	S-NPP	74.83461	31.94592	13:24:00	D	4.10
16	AMRITSAR	AJNALA	S-NPP	74.88198	31.95037	13:24:00	D	7.10
17	AMRITSAR	AMRITSAR I	AQUA	75.03500	31.53400	13:45:00	D	9.20
18	AMRITSAR	AMRITSAR I	S-NPP	75.03694	31.54132	13:24:00	D	6.70
19	AMRITSAR	AMRITSAR I	AQUA	74.96900	31.54400	13:45:00	D	10.20
20	AMRITSAR	AMRITSAR I	S-NPP	74.97453	31.56581	13:24:00	D	3.70
21	AMRITSAR	AMRITSAR I	S-NPP	75.05877	31.57980	13:24:00	D	5.90
22	AMRITSAR	AMRITSAR I	S-NPP	75.02553	31.59172	13:24:00	D	1.90
23	AMRITSAR	AMRITSAR I	S-NPP	75.01400	31.64992	13:24:00	D	2.80
24	AMRITSAR	AMRITSAR I	S-NPP	75.04764	31.65553	13:24:00	D	2.20
25	AMRITSAR	AMRITSAR I	S-NPP	75.11483	31.70494	13:24:00	D	8.10
26	AMRITSAR	AMRITSAR I	S-NPP	75.06606	31.72820	13:24:00	D	4.30
27	AMRITSAR	AMRITSAR I	S-NPP	75.06647	31.72888	13:24:00	D	3.00
28	AMRITSAR	AMRITSAR I	AQUA	75.07000	31.74200	13:45:00	D	5.90
29	AMRITSAR	AMRITSAR I	S-NPP	74.97516	31.76588	13:24:00	D	2.60
30	AMRITSAR	AMRITSAR I	S-NPP	75.08826	31.76729	13:24:00	D	1.80

31	AMRITSAR	AMRITSAR I	AQUA	74.94900	31.77200	13:45:00	D	18.50
32	AMRITSAR	AMRITSAR II	S-NPP	74.66331	31.56269	13:24:00	D	5.20
33	AMRITSAR	BABA BAKALA	S-NPP	75.08425	31.52483	13:24:00	D	2.70
34	AMRITSAR	BABA BAKALA	S-NPP	75.08694	31.53224	13:24:00	D	1.30
35	AMRITSAR	BABA BAKALA	AQUA	75.17100	31.56200	13:45:00	D	6.70
36	AMRITSAR	BABA BAKALA	S-NPP	75.31381	31.56297	13:24:00	D	5.50
37	AMRITSAR	BABA BAKALA	S-NPP	75.17495	31.58512	13:24:00	D	2.60
38	AMRITSAR	BABA BAKALA	AQUA	75.30500	31.59900	13:45:00	D	6.80
39	AMRITSAR	BABA BAKALA	AQUA	75.33700	31.60300	13:45:00	D	9.10
40	AMRITSAR	BABA BAKALA	S-NPP	75.24629	31.61422	13:24:00	D	2.10
41	AMRITSAR	BABA BAKALA	AQUA	75.21900	31.61500	13:45:00	D	4.90
42	AMRITSAR	BABA BAKALA	AQUA	75.16100	31.63500	13:45:00	D	7.60
43	AMRITSAR	BABA BAKALA	AQUA	75.21400	31.64200	13:45:00	D	22.50
44	AMRITSAR	BABA BAKALA	S-NPP	75.15277	31.65215	13:24:00	D	4.60
45	AMRITSAR	BABA BAKALA	S-NPP	75.30238	31.65960	13:24:00	D	4.20
46	AMRITSAR	BABA BAKALA	S-NPP	75.27595	31.66216	13:24:00	D	4.80
47	AMRITSAR	BABA BAKALA	S-NPP	75.16305	31.66428	13:24:00	D	3.20
48	AMRITSAR	BABA BAKALA	S-NPP	75.24574	31.68143	13:24:00	D	6.00
49	AMRITSAR	BABA BAKALA	S-NPP	75.10418	31.71361	13:24:00	D	7.60
50	AMRITSAR	BABA BAKALA	S-NPP	75.16772	31.72060	13:24:00	D	6.80
51	BARNALA	BARNALA	S-NPP	75.53242	30.30155	13:24:00	D	7.30
52	BARNALA	BARNALA	S-NPP	75.65326	30.37344	13:24:00	D	5.00
53	BARNALA	TAPPA	S-NPP	75.44206	30.34224	13:24:00	D	4.00
54	BARNALA	TAPPA	S-NPP	75.44620	30.34292	13:24:00	D	7.00
55	BARNALA	TAPPA	S-NPP	75.43622	30.39110	13:24:00	D	1.30
56	BATHINDA	BATHINDA	AQUA	74.79500	30.22100	13:45:00	D	8.80
57	BATHINDA	BATHINDA	AQUA	74.88200	30.28000	13:45:00	D	8.50
58	BATHINDA	BATHINDA	S-NPP	74.84792	30.28461	13:24:00	D	3.30
59	BATHINDA	BATHINDA	S-NPP	74.94912	30.34784	13:24:00	D	1.80
60	BATHINDA	BATHINDA	AQUA	74.82000	30.35400	13:45:00	D	13.10
61	BATHINDA	BATHINDA	S-NPP	74.84739	30.36597	13:24:00	D	5.80
62	BATHINDA	TALWANDI SABO	AQUA	75.12000	29.82500	13:45:00	D	10.00
63	BATHINDA	TALWANDI SABO	AQUA	75.13000	29.82700	13:45:00	D	7.00

64	BATHINDA	TALWANDI SABO	S-NPP	75.10978	29.84458	13:24:00	D	5.60
65	FARIDKOT	FARIDKOT	AQUA	74.70800	30.62400	13:45:00	D	16.30
66	FARIDKOT	FARIDKOT	AQUA	74.73800	30.62900	13:45:00	D	33.00
67	FARIDKOT	FARIDKOT	S-NPP	74.74101	30.63142	13:24:00	D	9.40
68	FARIDKOT	FARIDKOT	AQUA	74.79500	30.66400	13:45:00	D	7.00
69	FARIDKOT	FARIDKOT	AQUA	74.80600	30.66500	13:45:00	D	5.30
70	FARIDKOT	FARIDKOT	S-NPP	74.79852	30.67306	13:24:00	D	7.30
71	FARIDKOT	FARIDKOT	AQUA	74.85000	30.70800	13:45:00	D	9.30
72	FARIDKOT	FARIDKOT	S-NPP	74.75127	30.73156	13:24:00	D	1.50
73	FARIDKOT	FARIDKOT	AQUA	74.77600	30.73400	13:45:00	D	7.00
74	FARIDKOT	FARIDKOT	S-NPP	74.62417	30.73820	13:24:00	D	3.60
75	FARIDKOT	FARIDKOT	S-NPP	74.75677	30.74666	13:24:00	D	7.90
76	FARIDKOT	FARIDKOT	S-NPP	74.81835	30.75007	13:24:00	D	2.20
77	FARIDKOT	FARIDKOT	S-NPP	74.81758	30.75347	13:24:00	D	2.20
78	FARIDKOT	JAITO	S-NPP	74.80918	30.40071	13:24:00	D	1.70
79	FATEHGARH SAHIB	BASSI PATHANAN	S-NPP	76.48383	30.72331	13:24:00	D	14.40
80	FATEHGARH SAHIB	FATEHGARH SAHIB	AQUA	76.35000	30.48700	13:45:00	D	10.60
81	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.48116	30.49570	13:24:00	D	3.50
82	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.50766	30.58813	13:24:00	D	5.00
83	FATEHGARH SAHIB	FATEHGARH SAHIB	AQUA	76.43300	30.62600	13:45:00	D	5.60
84	FATEHGARH SAHIB	KHAMANOH	AQUA	76.28800	30.80100	13:45:00	D	6.50
85	FAZILKA	ABOHAR	S-NPP	74.06477	30.04889	13:24:00	D	6.00
86	FAZILKA	FAZILKA	AQUA	74.04100	30.44400	13:45:00	D	11.10
87	FAZILKA	JALALABAD	AQUA	74.21400	30.47900	13:45:00	D	7.00
88	FAZILKA	JALALABAD	S-NPP	74.23077	30.51062	13:24:00	D	4.20
89	FAZILKA	JALALABAD	AQUA	74.32500	30.66100	13:45:00	D	9.20
90	FAZILKA	JALALABAD	S-NPP	74.46243	30.69255	13:24:00	D	6.60
91	FAZILKA	JALALABAD	AQUA	74.42100	30.71100	13:45:00	D	11.70
92	FAZILKA	JALALABAD	AQUA	74.43100	30.71300	13:45:00	D	21.10
93	FAZILKA	JALALABAD	S-NPP	74.42894	30.71896	13:24:00	D	5.10
94	FAZILKA	JALALABAD	AQUA	74.39800	30.79200	13:45:00	D	53.20
95	FIROZPUR	FIROZPUR	AQUA	74.86600	30.76500	13:45:00	D	9.70
96	FIROZPUR	FIROZPUR	S-NPP	74.50402	30.77270	13:24:00	D	10.30



97	FIROZPUR	FIROZPUR	AQUA	74.49600	30.77800	13:45:00	D	28.50
98	FIROZPUR	FIROZPUR	AQUA	74.50600	30.78000	13:45:00	D	12.90
99	FIROZPUR	FIROZPUR	AQUA	74.47400	30.78400	13:45:00	D	18.10
100	FIROZPUR	FIROZPUR	AQUA	74.48400	30.78600	13:45:00	D	8.40
101	FIROZPUR	FIROZPUR	S-NPP	74.44080	30.79030	13:24:00	D	5.50
102	FIROZPUR	FIROZPUR	S-NPP	74.41287	30.79261	13:24:00	D	6.00
103	FIROZPUR	FIROZPUR	AQUA	74.40500	30.81100	13:45:00	D	5.60
104	FIROZPUR	FIROZPUR	AQUA	74.41500	30.81300	13:45:00	D	6.30
105	FIROZPUR	FIROZPUR	AQUA	74.51000	30.81700	13:45:00	D	7.80
106	FIROZPUR	FIROZPUR	S-NPP	74.47826	30.82534	13:24:00	D	2.20
107	FIROZPUR	FIROZPUR	S-NPP	74.69296	30.83373	13:24:00	D	6.50
108	FIROZPUR	FIROZPUR	S-NPP	74.45241	30.83875	13:24:00	D	2.10
109	FIROZPUR	FIROZPUR	S-NPP	74.80940	30.91005	13:24:00	D	2.80
110	FIROZPUR	FIROZPUR	S-NPP	74.77624	30.94288	13:24:00	D	4.70
111	FIROZPUR	FIROZPUR	S-NPP	74.67197	30.94983	13:24:00	D	4.60
112	FIROZPUR	FIROZPUR	S-NPP	74.53653	30.95153	13:24:00	D	22.00
113	FIROZPUR	FIROZPUR	S-NPP	74.52546	30.96030	13:24:00	D	4.90
114	FIROZPUR	FIROZPUR	S-NPP	74.75873	30.96108	13:24:00	D	1.70
115	FIROZPUR	FIROZPUR	AQUA	74.56100	30.98100	13:45:00	D	5.20
116	FIROZPUR	FIROZPUR	S-NPP	74.76736	31.00137	13:24:00	D	3.60
117	FIROZPUR	FIROZPUR	S-NPP	74.63229	31.00913	13:24:00	D	3.30
118	FIROZPUR	FIROZPUR	S-NPP	74.76348	31.01836	13:24:00	D	4.50
119	FIROZPUR	FIROZPUR	S-NPP	74.65625	31.04158	13:24:00	D	7.40
120	FIROZPUR	ZIRA	S-NPP	74.85059	30.92402	13:24:00	D	3.10
121	FIROZPUR	ZIRA	S-NPP	75.33574	30.94195	13:24:00	D	4.50
122	FIROZPUR	ZIRA	S-NPP	75.00915	31.04545	13:24:00	D	7.10
123	GURDASPUR	BATALA	S-NPP	75.35016	31.75392	13:24:00	D	3.60
124	GURDASPUR	BATALA	S-NPP	75.33208	31.75788	13:24:00	D	3.30
125	GURDASPUR	BATALA	S-NPP	75.38301	31.77998	13:24:00	D	2.60
126	GURDASPUR	BATALA	AQUA	75.29200	31.78100	13:45:00	D	9.20
127	GURDASPUR	BATALA	S-NPP	75.38316	31.78137	13:24:00	D	3.40
128	GURDASPUR	BATALA	S-NPP	75.33875	31.78789	13:24:00	D	3.00
129	GURDASPUR	BATALA	AQUA	75.28400	31.78900	13:45:00	D	7.60

130	GURDASPUR	BATALA	S-NPP	75.32971	31.78986	13:24:00	D	11.40
131	GURDASPUR	BATALA	S-NPP	75.11304	31.79226	13:24:00	D	3.10
132	GURDASPUR	BATALA	AQUA	75.12900	31.79600	13:45:00	D	6.60
133	GURDASPUR	BATALA	S-NPP	75.03853	31.83666	13:24:00	D	1.70
134	GURDASPUR	BATALA	S-NPP	75.03207	31.88430	13:24:00	D	3.70
135	GURDASPUR	DERA BABA NANAK	S-NPP	75.12246	31.92702	13:24:00	D	5.70
136	GURDASPUR	DERA BABA NANAK	S-NPP	74.91618	31.93517	13:24:00	D	1.50
137	GURDASPUR	DERA BABA NANAK	S-NPP	74.96182	31.94630	13:24:00	D	2.10
138	GURDASPUR	DERA BABA NANAK	AQUA	75.12000	32.01600	13:45:00	D	8.00
139	GURDASPUR	GURDASPUR	S-NPP	75.24393	31.96424	13:24:00	D	2.60
140	GURDASPUR	GURDASPUR	AQUA	75.10700	32.05000	13:45:00	D	13.30
141	HOSHIARPUR	GARHSHANKAR	S-NPP	76.10953	31.20704	13:24:00	D	2.80
142	HOSHIARPUR	HOSHIARPUR	AQUA	75.74000	31.54700	13:45:00	D	5.00
143	JALANDHAR	JALANDHAR II	AQUA	75.54300	31.44700	13:45:00	D	14.80
144	JALANDHAR	NAKODAR	AQUA	75.40900	31.00500	13:45:00	D	6.20
145	JALANDHAR	NAKODAR	AQUA	75.41900	31.00700	13:45:00	D	8.70
146	JALANDHAR	PHILLAUR	S-NPP	75.88000	31.06171	13:24:00	D	2.90
147	JALANDHAR	SHAHKOT	S-NPP	75.18924	31.07883	13:24:00	D	3.30
148	JALANDHAR	SHAHKOT	AQUA	75.20300	31.08900	13:45:00	D	14.10
149	JALANDHAR	SHAHKOT	S-NPP	75.27455	31.18397	13:24:00	D	7.40
150	KAPURTHALA	BHOLATH	AQUA	75.55100	31.57600	13:45:00	D	36.40
151	KAPURTHALA	BHOLATH	AQUA	75.56200	31.57800	13:45:00	D	6.80
152	KAPURTHALA	BHOLATH	S-NPP	75.54958	31.57936	13:24:00	D	3.40
153	KAPURTHALA	BHOLATH	S-NPP	75.54884	31.58269	13:24:00	D	3.40
154	KAPURTHALA	BHOLATH	S-NPP	75.55296	31.58335	13:24:00	D	3.40
155	KAPURTHALA	BHOLATH	AQUA	75.55000	31.58500	13:45:00	D	10.40
156	KAPURTHALA	KAPURTHALA	S-NPP	75.34829	31.44126	13:24:00	D	10.40
157	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.22816	31.34171	13:24:00	D	5.70
158	LUDHIANA	JAGRAON	S-NPP	75.42505	30.70464	13:24:00	D	5.90
159	LUDHIANA	SAMRALA	AQUA	76.19700	30.74200	13:45:00	D	14.50
160	LUDHIANA	SAMRALA	S-NPP	76.23751	30.75227	13:24:00	D	6.40
161	LUDHIANA	SAMRALA	S-NPP	76.27728	30.82008	13:24:00	D	4.70
162	LUDHIANA	SAMRALA	S-NPP	76.23383	30.99256	13:24:00	D	3.40

163	LUDHIANA	SAMRALA	S-NPP	76.23785	30.99320	13:24:00	D	4.30
164	MANSA	BUDHLADA	S-NPP	75.42728	29.82069	13:24:00	D	7.60
165	MANSA	BUDHLADA	AQUA	75.72500	29.82600	13:45:00	D	7.50
166	MANSA	BUDHLADA	AQUA	75.76600	29.83100	13:45:00	D	7.90
167	MANSA	BUDHLADA	S-NPP	75.65028	29.84002	13:24:00	D	4.40
168	MANSA	BUDHLADA	AQUA	75.64800	29.98100	13:45:00	D	11.70
169	MANSA	SARDULGARH	AQUA	75.28900	29.66500	13:45:00	D	6.60
170	MANSA	SARDULGARH	S-NPP	75.21298	29.66552	13:24:00	D	69.00
171	MANSA	SARDULGARH	S-NPP	75.29519	29.66874	13:24:00	D	1.90
172	MANSA	SARDULGARH	S-NPP	75.35114	29.67107	13:24:00	D	6.60
173	MANSA	SARDULGARH	S-NPP	75.26326	29.69503	13:24:00	D	3.10
174	MANSA	SARDULGARH	S-NPP	75.26402	29.69520	13:24:00	D	2.90
175	MANSA	SARDULGARH	S-NPP	75.19836	29.71574	13:24:00	D	3.00
176	MANSA	SARDULGARH	AQUA	75.25100	29.72400	13:45:00	D	8.80
177	MANSA	SARDULGARH	S-NPP	75.29181	29.81201	13:24:00	D	5.30
178	MOGA	NIHAL SINGH WALA	S-NPP	75.22215	30.60421	13:24:00	D	2.80
179	MOGA	NIHAL SINGH WALA	AQUA	75.27500	30.63800	13:45:00	D	6.70
180	MUKTSAR	GIDDARBAHA	S-NPP	74.51688	30.31324	13:24:00	D	2.50
181	MUKTSAR	GIDDARBAHA	S-NPP	74.66135	30.31656	13:24:00	D	1.80
182	MUKTSAR	GIDDARBAHA	S-NPP	74.66223	30.35234	13:24:00	D	3.80
183	MUKTSAR	MUKTSAR	AQUA	74.54800	30.50000	13:45:00	D	16.80
184	PATIALA	NABHA	AQUA	76.18900	30.42000	13:45:00	D	7.00
185	PATIALA	NABHA	S-NPP	76.13675	30.51575	13:24:00	D	1.90
186	PATIALA	PATIALA	AQUA	76.29700	30.16000	13:45:00	D	5.10
187	PATIALA	PATIALA	S-NPP	76.56820	30.17032	13:24:00	D	2.30
188	PATIALA	PATIALA	S-NPP	76.29460	30.19434	13:24:00	D	1.50
189	PATIALA	PATIALA	S-NPP	76.59123	30.21828	13:24:00	D	4.50
190	PATIALA	PATIALA	S-NPP	76.60583	30.22738	13:24:00	D	5.20
191	PATIALA	PATIALA	AQUA	76.43200	30.25000	13:45:00	D	5.60
192	PATIALA	PATIALA	S-NPP	76.21894	30.25763	13:24:00	D	3.60
193	PATIALA	PATIALA	S-NPP	76.50068	30.25779	13:24:00	D	1.90
194	PATIALA	PATIALA	S-NPP	76.61913	30.28320	13:24:00	D	4.20
195	PATIALA	PATIALA	AQUA	76.47900	30.43000	13:45:00	D	10.00

196	PATIALA	RAJPURA	S-NPP	76.60847	30.35618	13:24:00	D	7.60
197	PATIALA	RAJPURA	S-NPP	76.50404	30.46518	13:24:00	D	4.50
198	PATIALA	RAJPURA	S-NPP	76.51330	30.48028	13:24:00	D	1.70
199	PATIALA	RAJPURA	AQUA	76.51500	30.51700	13:45:00	D	7.10
200	PATIALA	RAJPURA	S-NPP	76.58780	30.51920	13:24:00	D	1.50
201	PATIALA	RAJPURA	S-NPP	76.67892	30.55721	13:24:00	D	5.10
202	PATIALA	SAMANA	S-NPP	76.19944	29.84768	13:24:00	D	13.00
203	PATIALA	SAMANA	S-NPP	76.19933	29.85003	13:24:00	D	17.40
204	PATIALA	SAMANA	S-NPP	76.14820	29.85551	13:24:00	D	9.70
205	PATIALA	SAMANA	S-NPP	76.14751	29.85884	13:24:00	D	9.70
206	PATIALA	SAMANA	AQUA	76.08100	29.86400	13:45:00	D	6.20
207	PATIALA	SAMANA	AQUA	76.21100	29.87200	13:45:00	D	10.80
208	PATIALA	SAMANA	S-NPP	76.21526	29.87319	13:24:00	D	2.80
209	PATIALA	SAMANA	S-NPP	76.02592	29.88048	13:24:00	D	3.70
210	PATIALA	SAMANA	S-NPP	76.21789	29.88048	13:24:00	D	2.10
211	PATIALA	SAMANA	S-NPP	76.21719	29.88380	13:24:00	D	2.10
212	PATIALA	SAMANA	S-NPP	76.15101	29.92126	13:24:00	D	5.00
213	PATIALA	SAMANA	S-NPP	76.15959	29.93980	13:24:00	D	2.60
214	PATIALA	SAMANA	S-NPP	76.18947	29.96025	13:24:00	D	1.30
215	PATIALA	SAMANA	S-NPP	76.16863	29.96033	13:24:00	D	10.20
216	PATIALA	SAMANA	AQUA	76.21900	30.01000	13:45:00	D	7.70
217	PATIALA	SAMANA	S-NPP	76.23194	30.17532	13:24:00	D	4.50
218	PATIALA	SAMANA	S-NPP	76.26078	30.17647	13:24:00	D	2.90
219	PATIALA	SAMANA	S-NPP	76.24708	30.18331	13:24:00	D	2.30
220	PATIALA	SAMANA	S-NPP	76.17480	30.23003	13:24:00	D	2.20
221	SANGRUR	DHURI	S-NPP	75.69512	30.49609	13:24:00	D	1.90
222	SANGRUR	MOONAK	S-NPP	75.89194	29.77752	13:24:00	D	4.20
223	SANGRUR	MOONAK	S-NPP	75.89603	29.77818	13:24:00	D	3.80
224	SANGRUR	MOONAK	S-NPP	75.86742	29.79598	13:24:00	D	2.80
225	SANGRUR	MOONAK	S-NPP	75.90121	29.81535	13:24:00	D	6.80
226	SANGRUR	MOONAK	S-NPP	75.86987	29.82404	13:24:00	D	4.80
227	SANGRUR	MOONAK	S-NPP	76.02103	29.82456	13:24:00	D	4.80
228	SANGRUR	MOONAK	S-NPP	75.98843	29.83994	13:24:00	D	1.70

229	SANGRUR	MOONAK	S-NPP	75.79190	29.85281	13:24:00	D	2.40
230	SANGRUR	MOONAK	AQUA	75.91900	29.88000	13:45:00	D	17.00
231	SANGRUR	MOONAK	AQUA	75.93000	29.88100	13:45:00	D	8.20
232	SANGRUR	MOONAK	S-NPP	75.94409	29.93424	13:24:00	D	8.10
233	SANGRUR	MOONAK	S-NPP	75.90589	29.95563	13:24:00	D	3.40
234	SANGRUR	SANGRUR	S-NPP	75.59281	30.19604	13:24:00	D	7.60
235	SANGRUR	SUNAM	S-NPP	75.94968	29.98688	13:24:00	D	2.40
236	SAS NAGAR	DERABASSI	S-NPP	76.82634	30.41730	13:24:00	D	3.80
237	SAS NAGAR	DERABASSI	S-NPP	76.86678	30.44055	13:24:00	D	3.10
238	SAS NAGAR	DERABASSI	S-NPP	76.85336	30.63157	13:24:00	D	1.60
239	SAS NAGAR	KHARAR	S-NPP	76.58362	30.78280	13:24:00	D	2.80
240	SAS NAGAR	KHARAR	S-NPP	76.58763	30.78343	13:24:00	D	3.30
241	SBS NAGAR	SBS NAGAR	S-NPP	76.06407	31.22379	13:24:00	D	3.00
242	TARN TARAN	KHADOOR SAHIB	S-NPP	74.94962	31.22154	13:24:00	D	4.60
243	TARN TARAN	KHADOOR SAHIB	S-NPP	74.94884	31.22491	13:24:00	D	4.60
244	TARN TARAN	KHADOOR SAHIB	S-NPP	74.92543	31.27005	13:24:00	D	2.80
245	TARN TARAN	KHADOOR SAHIB	S-NPP	74.92596	31.27008	13:24:00	D	2.70
246	TARN TARAN	KHADOOR SAHIB	S-NPP	74.92519	31.27345	13:24:00	D	2.70
247	TARN TARAN	KHADOOR SAHIB	AQUA	75.01400	31.28300	13:45:00	D	6.60
248	TARN TARAN	KHADOOR SAHIB	AQUA	75.02400	31.28500	13:45:00	D	9.30
249	TARN TARAN	KHADOOR SAHIB	S-NPP	74.95753	31.28593	13:24:00	D	12.00
250	TARN TARAN	KHADOOR SAHIB	AQUA	74.98400	31.29700	13:45:00	D	6.20
251	TARN TARAN	KHADOOR SAHIB	S-NPP	75.14263	31.31702	13:24:00	D	4.40
252	TARN TARAN	KHADOOR SAHIB	S-NPP	75.09694	31.32681	13:24:00	D	3.40
253	TARN TARAN	KHADOOR SAHIB	S-NPP	75.06183	31.32792	13:24:00	D	1.90
254	TARN TARAN	KHADOOR SAHIB	S-NPP	74.92914	31.33368	13:24:00	D	12.70
255	TARN TARAN	KHADOOR SAHIB	S-NPP	74.97220	31.33739	13:24:00	D	7.80
256	TARN TARAN	KHADOOR SAHIB	AQUA	75.10400	31.35000	13:45:00	D	6.50
257	TARN TARAN	KHADOOR SAHIB	AQUA	75.01300	31.37500	13:45:00	D	6.40
258	TARN TARAN	KHADOOR SAHIB	S-NPP	75.02864	31.37824	13:24:00	D	28.50
259	TARN TARAN	KHADOOR SAHIB	S-NPP	75.02788	31.38160	13:24:00	D	28.50
260	TARN TARAN	KHADOOR SAHIB	S-NPP	74.92334	31.38222	13:24:00	D	2.30
261	TARN TARAN	KHADOOR SAHIB	AQUA	74.81100	31.38400	13:45:00	D	11.70



262	TARN TARAN	KHADOOR SAHIB	S-NPP	74.82111	31.38596	13:24:00	D	2.70
263	TARN TARAN	KHADOOR SAHIB	AQUA	74.82100	31.38600	13:45:00	D	9.80
264	TARN TARAN	KHADOOR SAHIB	AQUA	75.09700	31.38600	13:45:00	D	14.20
265	TARN TARAN	KHADOOR SAHIB	S-NPP	74.79013	31.40531	13:24:00	D	2.10
266	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03158	31.40745	13:24:00	D	2.20
267	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03578	31.40816	13:24:00	D	2.80
268	TARN TARAN	KHADOOR SAHIB	S-NPP	75.18433	31.42136	13:24:00	D	2.20
269	TARN TARAN	KHADOOR SAHIB	AQUA	75.14800	31.42200	13:45:00	D	6.40
270	TARN TARAN	KHADOOR SAHIB	S-NPP	75.18477	31.42263	13:24:00	D	5.50
271	TARN TARAN	KHADOOR SAHIB	S-NPP	75.16164	31.42921	13:24:00	D	1.40
272	TARN TARAN	KHADOOR SAHIB	S-NPP	74.85439	31.43369	13:24:00	D	14.40
273	TARN TARAN	KHADOOR SAHIB	S-NPP	74.76958	31.43699	13:24:00	D	2.50
274	TARN TARAN	KHADOOR SAHIB	S-NPP	74.72449	31.43997	13:24:00	D	2.90
275	TARN TARAN	KHADOOR SAHIB	S-NPP	74.97532	31.44343	13:24:00	D	6.20
276	TARN TARAN	KHADOOR SAHIB	S-NPP	75.10610	31.44432	13:24:00	D	4.30
277	TARN TARAN	KHADOOR SAHIB	AQUA	74.79400	31.44600	13:45:00	D	5.30
278	TARN TARAN	KHADOOR SAHIB	AQUA	74.80200	31.45600	13:45:00	D	22.80
279	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08974	31.45901	13:24:00	D	4.30
280	TARN TARAN	KHADOOR SAHIB	S-NPP	74.80837	31.46106	13:24:00	D	3.80
281	TARN TARAN	KHADOOR SAHIB	S-NPP	74.80334	31.46373	13:24:00	D	7.70
282	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03971	31.46813	13:24:00	D	4.90
283	TARN TARAN	KHADOOR SAHIB	AQUA	75.00300	31.47500	13:45:00	D	10.40
284	TARN TARAN	KHADOOR SAHIB	S-NPP	74.87141	31.47508	13:24:00	D	11.00
285	TARN TARAN	KHADOOR SAHIB	S-NPP	74.87137	31.47852	13:24:00	D	3.90
286	TARN TARAN	KHADOOR SAHIB	AQUA	74.70100	31.47900	13:45:00	D	10.80
287	TARN TARAN	KHADOOR SAHIB	S-NPP	75.15871	31.48090	13:24:00	D	9.50
288	TARN TARAN	KHADOOR SAHIB	S-NPP	74.68878	31.48266	13:24:00	D	8.90
289	TARN TARAN	KHADOOR SAHIB	S-NPP	74.69229	31.48678	13:24:00	D	9.40
290	TARN TARAN	KHADOOR SAHIB	S-NPP	74.82079	31.48748	13:24:00	D	5.00
291	TARN TARAN	KHADOOR SAHIB	S-NPP	74.82001	31.49086	13:24:00	D	2.30
292	TARN TARAN	KHADOOR SAHIB	S-NPP	74.75298	31.49356	13:24:00	D	1.10
293	TARN TARAN	KHADOOR SAHIB	AQUA	75.02100	31.49600	13:45:00	D	5.30
294	TARN TARAN	KHADOOR SAHIB	AQUA	75.03100	31.49700	13:45:00	D	20.00

295	TARN TARAN	KHADOOR SAHIB	S-NPP	74.61377	31.49813	13:24:00	D	7.30
296	TARN TARAN	KHADOOR SAHIB	S-NPP	75.17168	31.50042	13:24:00	D	2.40
297	TARN TARAN	KHADOOR SAHIB	S-NPP	75.19334	31.50051	13:24:00	D	3.20
298	TARN TARAN	KHADOOR SAHIB	AQUA	75.19300	31.50100	13:45:00	D	4.60
299	TARN TARAN	KHADOOR SAHIB	S-NPP	74.90492	31.50520	13:24:00	D	10.00
300	TARN TARAN	KHADOOR SAHIB	S-NPP	74.76774	31.50660	13:24:00	D	2.30
301	TARN TARAN	KHADOOR SAHIB	S-NPP	74.71761	31.51219	13:24:00	D	4.00
302	TARN TARAN	KHADOOR SAHIB	AQUA	74.82300	31.51400	13:45:00	D	8.10
303	TARN TARAN	KHADOOR SAHIB	S-NPP	74.78325	31.51624	13:24:00	D	4.40
304	TARN TARAN	KHADOOR SAHIB	S-NPP	74.77821	31.51891	13:24:00	D	1.70
305	TARN TARAN	KHADOOR SAHIB	S-NPP	74.93226	31.52029	13:24:00	D	2.30
306	TARN TARAN	KHADOOR SAHIB	S-NPP	74.71450	31.52574	13:24:00	D	1.70
307	TARN TARAN	KHADOOR SAHIB	S-NPP	74.88260	31.52595	13:24:00	D	2.10
308	TARN TARAN	KHADOOR SAHIB	S-NPP	74.63412	31.52627	13:24:00	D	10.20
309	TARN TARAN	KHADOOR SAHIB	AQUA	74.64300	31.52700	13:45:00	D	6.10
310	TARN TARAN	KHADOOR SAHIB	S-NPP	74.74989	31.54576	13:24:00	D	5.90
311	TARN TARAN	PATTI	S-NPP	74.59100	31.11831	13:24:00	D	4.40
312	TARN TARAN	PATTI	S-NPP	74.57568	31.12630	13:24:00	D	4.80
313	TARN TARAN	PATTI	S-NPP	74.67374	31.12898	13:24:00	D	1.70
314	TARN TARAN	PATTI	S-NPP	74.61224	31.14321	13:24:00	D	2.70
315	TARN TARAN	PATTI	AQUA	74.79900	31.15200	13:45:00	D	10.40
316	TARN TARAN	PATTI	S-NPP	74.80578	31.15509	13:24:00	D	1.80
317	TARN TARAN	PATTI	AQUA	74.71700	31.16000	13:45:00	D	5.60
318	TARN TARAN	PATTI	S-NPP	74.64872	31.16007	13:24:00	D	8.20
319	TARN TARAN	PATTI	S-NPP	74.63853	31.16541	13:24:00	D	4.80
320	TARN TARAN	PATTI	AQUA	74.91200	31.17700	13:45:00	D	10.30
321	TARN TARAN	PATTI	AQUA	74.60400	31.19000	13:45:00	D	6.90
322	TARN TARAN	PATTI	AQUA	74.83600	31.20400	13:45:00	D	9.60
323	TARN TARAN	PATTI	AQUA	74.75000	31.21000	13:45:00	D	5.80
324	TARN TARAN	PATTI	S-NPP	74.74252	31.21834	13:24:00	D	5.10
325	TARN TARAN	PATTI	S-NPP	74.74174	31.22173	13:24:00	D	3.60
326	TARN TARAN	PATTI	S-NPP	74.53139	31.22381	13:24:00	D	2.60
327	TARN TARAN	PATTI	AQUA	74.69200	31.23000	13:45:00	D	6.20

328	TARN TARAN	PATTI	AQUA	74.53700	31.23500	13:45:00	D	6.00
329	TARN TARAN	PATTI	AQUA	74.62000	31.24700	13:45:00	D	10.00
330	TARN TARAN	PATTI	AQUA	74.63000	31.24800	13:45:00	D	7.20
331	TARN TARAN	PATTI	S-NPP	74.71838	31.24882	13:24:00	D	12.80
332	TARN TARAN	PATTI	S-NPP	74.74914	31.25055	13:24:00	D	6.90
333	TARN TARAN	PATTI	AQUA	74.58700	31.25100	13:45:00	D	6.80
334	TARN TARAN	PATTI	AQUA	74.84800	31.25100	13:45:00	D	10.30
335	TARN TARAN	PATTI	S-NPP	74.71761	31.25222	13:24:00	D	12.80
336	TARN TARAN	PATTI	S-NPP	74.58730	31.25468	13:24:00	D	7.40
337	TARN TARAN	PATTI	AQUA	74.61800	31.25600	13:45:00	D	13.00
338	TARN TARAN	PATTI	S-NPP	74.86674	31.25676	13:24:00	D	3.90
339	TARN TARAN	PATTI	AQUA	74.57500	31.25900	13:45:00	D	15.20
340	TARN TARAN	PATTI	S-NPP	74.56331	31.26121	13:24:00	D	2.60
341	TARN TARAN	PATTI	S-NPP	74.56686	31.26535	13:24:00	D	3.60
342	TARN TARAN	PATTI	S-NPP	74.72581	31.27477	13:24:00	D	13.60
343	TARN TARAN	PATTI	S-NPP	74.68564	31.27500	13:24:00	D	4.10
344	TARN TARAN	PATTI	S-NPP	74.80004	31.28034	13:24:00	D	1.50
345	TARN TARAN	PATTI	S-NPP	74.71490	31.28349	13:24:00	D	1.90
346	TARN TARAN	PATTI	S-NPP	74.71334	31.29029	13:24:00	D	2.10
347	TARN TARAN	PATTI	AQUA	74.55700	31.29300	13:45:00	D	19.40
348	TARN TARAN	PATTI	S-NPP	74.63911	31.30241	13:24:00	D	1.80
349	TARN TARAN	PATTI	S-NPP	74.57040	31.30845	13:24:00	D	4.20
350	TARN TARAN	PATTI	S-NPP	74.67783	31.30896	13:24:00	D	2.30
351	TARN TARAN	PATTI	S-NPP	74.55584	31.31307	13:24:00	D	3.00
352	TARN TARAN	PATTI	S-NPP	74.56918	31.31822	13:24:00	D	2.30
353	TARN TARAN	PATTI	S-NPP	74.59431	31.32610	13:24:00	D	2.30
354	TARN TARAN	PATTI	AQUA	74.76200	31.34000	13:45:00	D	5.20
355	TARN TARAN	PATTI	AQUA	74.77200	31.34100	13:45:00	D	6.80
356	TARN TARAN	PATTI	S-NPP	74.89832	31.35305	13:24:00	D	2.20
357	TARN TARAN	PATTI	S-NPP	74.91105	31.35517	13:24:00	D	3.20
358	TARN TARAN	PATTI	S-NPP	74.77380	31.36035	13:24:00	D	3.10
359	TARN TARAN	PATTI	S-NPP	74.64369	31.38402	13:24:00	D	13.80
360	TARN TARAN	PATTI	AQUA	74.71400	31.38900	13:45:00	D	7.00

361	TARN TARAN	PATTI	S-NPP	74.62961	31.40634	13:24:00	D	3.60
362	TARN TARAN	PATTI	S-NPP	74.61942	31.41168	13:24:00	D	3.20

**Details of residue burning events in Haryana on 12-Oct-2020**

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m <sup>2</sup> )
1	AMBALA	AMBALA	S-NPP	76.67315	30.20039	13:24:00	D	2.40
2	AMBALA	AMBALA	S-NPP	76.76746	30.20145	13:24:00	D	2.20
3	AMBALA	AMBALA	S-NPP	76.93052	30.20626	13:24:00	D	3.60
4	AMBALA	AMBALA	S-NPP	76.93449	30.20687	13:24:00	D	4.70
5	AMBALA	AMBALA	AQUA	76.78300	30.23200	13:45:00	D	6.30
6	AMBALA	AMBALA	S-NPP	76.61974	30.23978	13:24:00	D	2.30
7	AMBALA	AMBALA	AQUA	76.93800	30.34900	13:45:00	D	7.90
8	AMBALA	BARARA	S-NPP	77.09678	30.23517	13:24:00	D	1.80
9	AMBALA	BARARA	S-NPP	77.10075	30.23578	13:24:00	D	3.60
10	AMBALA	BARARA	AQUA	77.11900	30.26500	13:45:00	D	6.50
11	AMBALA	NARAYANGARH	S-NPP	77.05312	30.35029	13:24:00	D	2.50
12	AMBALA	NARAYANGARH	S-NPP	77.08650	30.45040	13:24:00	D	2.30
13	AMBALA	NARAYANGARH	S-NPP	77.08585	30.45370	13:24:00	D	2.30
14	FATEHABAD	FATEHABAD	S-NPP	75.74050	29.53209	13:24:00	D	8.00
15	FATEHABAD	RATIA	S-NPP	75.43584	29.69918	13:24:00	D	5.80
16	FATEHABAD	TOHANA	S-NPP	75.81832	29.54483	13:24:00	D	4.20
17	FATEHABAD	TOHANA	S-NPP	75.87241	29.61060	13:24:00	D	3.50
18	FATEHABAD	TOHANA	S-NPP	75.86050	29.72745	13:24:00	D	2.90
19	HISAR	HANSI	S-NPP	76.22394	29.00322	02:06:00	N	0.50
20	HISAR	HISAR	S-NPP	75.86066	29.11699	13:24:00	D	5.30
21	HISAR	HISAR	S-NPP	76.08279	29.40693	13:24:00	D	2.90
22	HISAR	HISAR	AQUA	75.95100	29.53500	13:45:00	D	8.00
23	HISAR	NARNAUND	S-NPP	76.12384	29.26526	13:24:00	D	1.70
24	JIND	JIND	S-NPP	76.38669	29.41932	13:24:00	D	2.90
25	JIND	JIND	S-NPP	76.39069	29.41996	13:24:00	D	2.90
26	JIND	JIND	S-NPP	76.36179	29.52412	13:24:00	D	3.50
27	JIND	NARWANA	S-NPP	76.30142	29.45611	13:24:00	D	3.30
28	JIND	NARWANA	S-NPP	76.30073	29.45944	13:24:00	D	2.30
29	JIND	NARWANA	S-NPP	76.03979	29.53253	13:24:00	D	1.70
30	JIND	NARWANA	S-NPP	76.24370	29.53461	13:24:00	D	7.30



31	JIND	NARWANA	S-NPP	76.12379	29.57027	13:24:00	D	5.10
32	JIND	NARWANA	AQUA	76.11800	29.75000	13:45:00	D	6.80
33	JIND	NARWANA	S-NPP	76.20889	29.84232	13:24:00	D	1.70
34	KAITHAL	GUHLA	S-NPP	76.22855	29.88906	13:24:00	D	0.70
35	KAITHAL	GUHLA	AQUA	76.23400	29.89300	13:45:00	D	10.80
36	KAITHAL	GUHLA	S-NPP	76.23451	29.90030	13:24:00	D	5.00
37	KAITHAL	GUHLA	S-NPP	76.23960	29.93542	13:24:00	D	9.00
38	KAITHAL	GUHLA	S-NPP	76.19682	29.96487	13:24:00	D	6.00
39	KAITHAL	GUHLA	S-NPP	76.44565	30.08328	13:24:00	D	2.10
40	KAITHAL	KAITHAL	S-NPP	76.40043	29.59751	13:24:00	D	2.90
41	KAITHAL	KAITHAL	S-NPP	76.51225	29.61530	13:24:00	D	2.80
42	KAITHAL	KAITHAL	S-NPP	76.61287	29.68587	13:24:00	D	2.70
43	KAITHAL	KAITHAL	S-NPP	76.62572	29.72489	13:24:00	D	2.30
44	KAITHAL	KAITHAL	S-NPP	76.37217	29.77583	13:24:00	D	4.40
45	KAITHAL	KAITHAL	S-NPP	76.28923	29.77625	13:24:00	D	1.80
46	KAITHAL	KAITHAL	S-NPP	76.66999	29.82988	13:24:00	D	2.40
47	KAITHAL	KAITHAL	AQUA	76.55400	29.88000	13:45:00	D	8.70
48	KAITHAL	KAITHAL	S-NPP	76.55543	29.88696	13:24:00	D	4.70
49	KAITHAL	KAITHAL	AQUA	76.37300	29.89400	13:45:00	D	7.30
50	KAITHAL	KAITHAL	AQUA	76.38400	29.89500	13:45:00	D	11.20
51	KAITHAL	KAITHAL	S-NPP	76.32355	29.91112	13:24:00	D	3.30
52	KARNAL	ASSANDH	S-NPP	76.61662	29.54741	13:24:00	D	1.70
53	KARNAL	ASSANDH	S-NPP	76.74906	29.56140	13:24:00	D	2.70
54	KARNAL	ASSANDH	S-NPP	76.73647	29.62338	13:24:00	D	3.20
55	KARNAL	ASSANDH	S-NPP	76.72649	29.63205	13:24:00	D	1.60
56	KARNAL	GHARAUNDA	S-NPP	77.02486	29.57029	13:24:00	D	1.20
57	KARNAL	INDRI	S-NPP	77.06592	29.93565	13:24:00	D	2.10
58	KARNAL	INDRI	AQUA	77.02600	29.93900	13:45:00	D	8.20
59	KARNAL	KARNAL	S-NPP	76.82625	29.60414	13:24:00	D	1.80
60	KARNAL	KARNAL	S-NPP	76.87650	29.65892	13:24:00	D	2.50
61	KARNAL	KARNAL	S-NPP	76.73087	29.69072	13:24:00	D	2.80
62	KARNAL	KARNAL	S-NPP	76.76025	29.72898	13:24:00	D	17.30
63	KARNAL	KARNAL	AQUA	77.03600	29.74800	13:45:00	D	9.20
64	KARNAL	NILOKHERI	S-NPP	76.95238	29.80998	13:24:00	D	1.30

65	KARNAL	NILOKHERI	S-NPP	76.83809	29.86981	13:24:00	D	2.40
66	KARNAL	NILOKHERI	S-NPP	76.93053	29.91819	13:24:00	D	1.30
67	KURUKSHETRA	PEHOWA	S-NPP	76.71976	30.09215	13:24:00	D	4.20
68	KURUKSHETRA	PEHOWA	S-NPP	76.47226	30.09431	13:24:00	D	2.50
69	KURUKSHETRA	PEHOWA	S-NPP	76.64195	30.11068	13:24:00	D	1.40
70	KURUKSHETRA	PEHOWA	AQUA	76.74000	30.15100	13:45:00	D	7.60
71	KURUKSHETRA	PEHOWA	AQUA	76.75100	30.15200	13:45:00	D	10.00
72	KURUKSHETRA	SHAHABAD	S-NPP	76.85020	30.15667	13:24:00	D	2.80
73	KURUKSHETRA	SHAHABAD	S-NPP	76.85419	30.15729	13:24:00	D	4.40
74	KURUKSHETRA	SHAHABAD	S-NPP	76.88760	30.17583	13:24:00	D	1.40
75	KURUKSHETRA	SHAHABAD	S-NPP	76.81335	30.17793	13:24:00	D	2.80
76	KURUKSHETRA	SHAHABAD	AQUA	76.83800	30.18200	13:45:00	D	7.90
77	KURUKSHETRA	SHAHABAD	S-NPP	76.84381	30.18947	13:24:00	D	3.30
78	KURUKSHETRA	THANESAR	AQUA	76.71900	29.91000	13:45:00	D	6.20
79	KURUKSHETRA	THANESAR	AQUA	76.95500	29.94900	13:45:00	D	6.90
80	KURUKSHETRA	THANESAR	S-NPP	77.01386	30.01247	13:24:00	D	4.20
81	KURUKSHETRA	THANESAR	S-NPP	77.01449	30.02957	13:24:00	D	2.70
82	KURUKSHETRA	THANESAR	AQUA	76.84000	30.03700	13:45:00	D	6.50
83	KURUKSHETRA	THANESAR	S-NPP	76.84512	30.03746	13:24:00	D	8.00
84	KURUKSHETRA	THANESAR	S-NPP	77.06143	30.04018	13:24:00	D	1.90
85	KURUKSHETRA	THANESAR	S-NPP	76.97672	30.05438	13:24:00	D	2.80
86	KURUKSHETRA	THANESAR	S-NPP	76.77960	30.06060	13:24:00	D	2.80
87	KURUKSHETRA	THANESAR	S-NPP	76.78358	30.06122	13:24:00	D	2.70
88	KURUKSHETRA	THANESAR	S-NPP	76.98668	30.13008	13:24:00	D	2.10
89	PANIPAT	PANIPAT	S-NPP	76.78242	29.35304	13:24:00	D	2.00
90	SIRSA	SIRSA	S-NPP	74.95965	29.53399	13:24:00	D	6.50
91	SIRSA	SIRSA	S-NPP	75.11053	29.84118	13:24:00	D	5.60
92	SONIPAT	GOHANA	S-NPP	76.80782	29.18689	13:24:00	D	2.10
93	SONIPAT	GOHANA	S-NPP	76.79857	29.19226	13:24:00	D	3.20
94	YAMUNANAGAR	JAGADHRI	S-NPP	77.07206	30.13298	13:24:00	D	7.50
95	YAMUNANAGAR	JAGADHRI	S-NPP	77.07867	30.14080	13:24:00	D	3.30
96	YAMUNANAGAR	JAGADHRI	S-NPP	77.36729	30.21182	13:24:00	D	2.10
97	YAMUNANAGAR	JAGADHRI	S-NPP	77.17094	30.29407	13:24:00	D	2.30
98	YAMUNANAGAR	JAGADHRI	S-NPP	77.18441	30.43144	13:24:00	D	2.00

**Details of residue burning events in Uttar Pradesh on 12-Oct-2020**

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m <sup>2</sup> )
1	ALIGARH	KHAIR	S-NPP	77.53949	28.08711	02:06:00	N	0.80
2	ALIGARH	KOL	S-NPP	78.14796	27.95873	02:06:00	N	1.50
3	AURAIYA	BIDHUNA	S-NPP	79.47694	26.74405	02:06:00	N	0.90
4	AURAIYA	BIDHUNA	S-NPP	79.48007	26.74412	02:06:00	N	0.70
5	BAREILLY	MIRGANJ	S-NPP	79.31395	28.42600	02:06:00	N	0.70
6	BULANSAHAR	BULANSHAHAR	S-NPP	77.76649	28.58645	13:24:00	D	0.70
7	BULANSAHAR	SHIKARPUR	S-NPP	78.11311	28.12588	02:06:00	N	0.40
8	BULANSAHAR	SHIKARPUR	S-NPP	78.03979	28.35256	02:06:00	N	0.70
9	FATEHPUR	FATEHPUR	S-NPP	80.88042	25.83700	13:24:00	D	12.40
10	FATEHPUR	FATEHPUR	S-NPP	81.01890	25.84133	13:24:00	D	40.90
11	FATEHPUR	FATEHPUR	S-NPP	80.92596	25.91151	13:24:00	D	6.70
12	FATEHPUR	FATEHPUR	S-NPP	80.69648	25.96905	13:24:00	D	3.70
13	FIROZABAD	JASRANA	S-NPP	78.54821	27.33991	13:24:00	D	4.50
14	FIROZABAD	JASRANA	S-NPP	78.54760	27.34322	13:24:00	D	4.50
15	JHANSI	TAHRAULI	S-NPP	79.03158	25.60649	13:24:00	D	1.90
16	KHERI	MOHMADI	S-NPP	80.35576	27.87918	13:24:00	D	4.40
17	KHERI	MOHMADI	S-NPP	80.41895	27.92305	13:24:00	D	4.10
18	KHERI	MOHMADI	S-NPP	80.41837	27.92652	13:24:00	D	9.00
19	KHERI	MOHMADI	S-NPP	80.27841	28.05881	02:06:00	N	0.90
20	KHERI	MOHMADI	TERRA	80.26400	28.05900	10:35:00	D	15.20
21	MAHABA	KULPAHAR	S-NPP	79.37158	25.40270	13:24:00	D	2.50
22	MAINPURI	BHOGAON	S-NPP	79.14690	27.36711	13:24:00	D	3.20
23	MAINPURI	MAINPURI	S-NPP	78.79246	27.17539	02:06:00	N	0.40
24	MATHURA	MAT	METOP-2	77.78781	27.73871	20:25:00	N	7.50
25	MATHURA	MAT	S-NPP	77.79397	27.74886	02:06:00	N	1.60
26	MORADABAD	THAKUR DWARA	AQUA	78.87000	29.22200	13:45:00	D	12.10
27	RAMPUR	BILASPUR	S-NPP	79.34900	28.83746	02:06:00	N	1.20
28	RAMPUR	BILASPUR	S-NPP	79.35051	28.83752	02:06:00	N	0.90
29	RAMPUR	SUAR	S-NPP	79.16884	28.88638	13:24:00	D	1.60
30	RAMPUR	SUAR	S-NPP	79.16967	28.88722	13:24:00	D	2.50
31	RAMPUR	TANDA	S-NPP	78.98621	29.04904	13:24:00	D	2.90

32	SHAHJAHANPUR	JALALABAD	S-NPP	79.67814	27.52632	13:24:00	D	3.00
33	SHAHJAHANPUR	PUWANYA	S-NPP	80.06675	28.00063	02:06:00	N	0.60
34	SHAHJAHANPUR	PUWANYA	S-NPP	80.11347	28.12422	02:06:00	N	2.10
35	SHAMLI	KAIRANA	S-NPP	77.21795	29.68441	13:24:00	D	2.00
36	SHARANPUR	RAMPUR MANIHARRAN	AQUA	77.57400	29.67000	13:45:00	D	7.10
37	SHARANPUR	SHARANPUR	AQUA	77.50500	30.13000	13:45:00	D	6.10

**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

**Study Team**

ICAR – HQ	Dr K. Alagusundaram	DDG (AG. ENGG.)	<a href="mailto:ddgengg@icar.org.in">ddgengg@icar.org.in</a>
	Dr S. Bhasker	ADG (NRM)	<a href="mailto:adgagroandaf@gmail.com">adgagroandaf@gmail.com</a>
	Dr K.K. Singh	ADG (AG. ENGG)	<a href="mailto:kanchansingh044@gmail.com">kanchansingh044@gmail.com</a>
ICAR - IARI	<b>Dr V.K. Sehgal</b>	<b>Professor &amp; Nodal Scientist</b>	<a href="mailto:iaricreams@gmail.com">iaricreams@gmail.com</a>
	Dr Rajkumar Dhakar	Scientist	<a href="mailto:raidhakar.iari@gmail.com">raidhakar.iari@gmail.com</a>
	Mr Rakeswer Verma	Chief Technical Officer	<a href="mailto:rakeshwar.verma@icar.gov.in">rakeshwar.verma@icar.gov.in</a>
	Mr Mohd Jahangir	Lab Assistant (KRISHI)	<a href="mailto:mjahangir198@gmail.com">mjahangir198@gmail.com</a>
ICAR - ATARI	Dr Rajbir Singh	Director ATARI (Zone-I) Ludhiana	<a href="mailto:rajbirsingh.zpd@gmail.com">rajbirsingh.zpd@gmail.com</a>
	Dr S.K. Singh	Director ATARI (Zone-II) Jodhpur	<a href="mailto:sushilsinghiipr@yahoo.co.in">sushilsinghiipr@yahoo.co.in</a>
	Dr Atar Singh	Director ATARI (Zone-III) Kanpur	<a href="mailto:zpdicarkanpur@gmail.com">zpdicarkanpur@gmail.com</a>
ICAR - IASRI	Dr Rajender Parsad	Director IASRI	<a href="mailto:rajender.parsad@icar.gov.in">rajender.parsad@icar.gov.in</a>

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)

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