



Bulletin No. 19

Events Date:
19-Oct-2019

Issued on:
20-Oct-2019



MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2019



Prepared by:

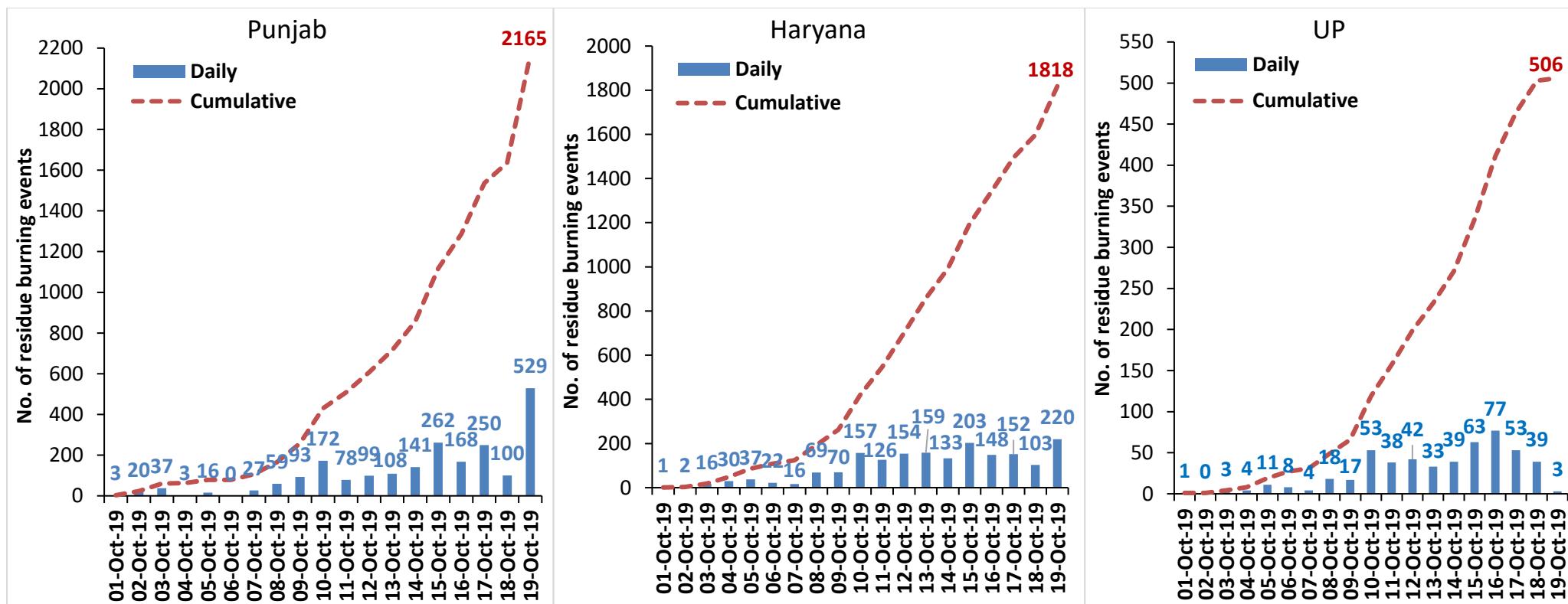
Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012

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

Highlights for 19-October-2019

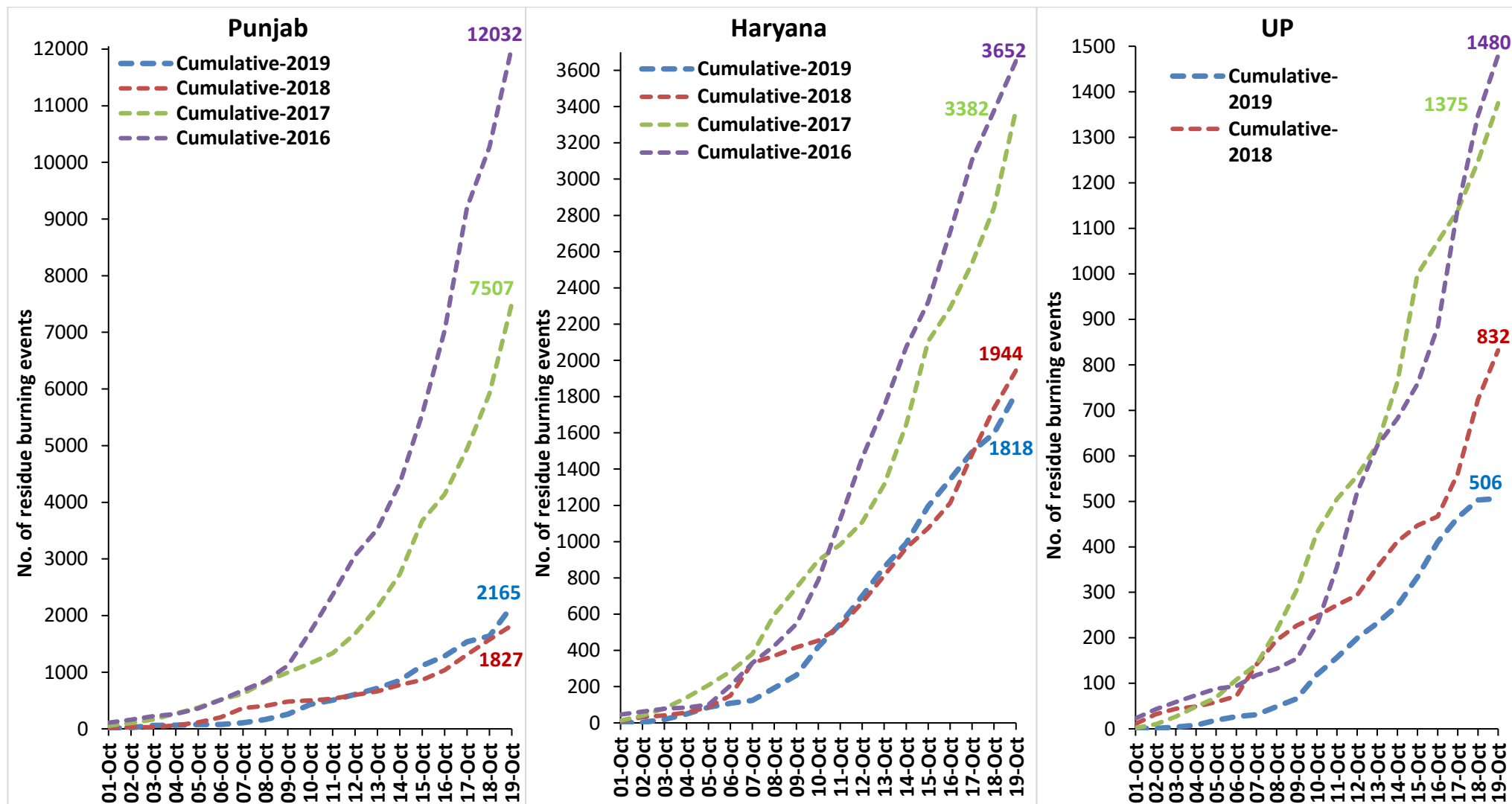
- Satellites detected **752** residue burning events in the three study States on 19-Oct-2019.
- The burning events detected on **19-Oct-2019** are **529**, **220** and **03** in Punjab, Haryana and UP, respectively.
- The number of events has increased from **242** on **18-Oct-2019** to **752** on **19-Oct-2019** in the three states.
- Total **4489** burning events were detected in the three States between **01-Oct-2019** and **19-Oct-2019**, which are distributed as **2165**, **1818** and **506** in Punjab, Haryana and UP, respectively.
- Overall, the total burning events recorded in the three states are **2.5%** less than in 2018 till date. Haryana and UP recorded **6.5%** and **39.2%** reduction respectively while Punjab recorded **18.5%** increase, in the current season than in 2018.

Temporal distribution of residue burning events for the three study States in 2019

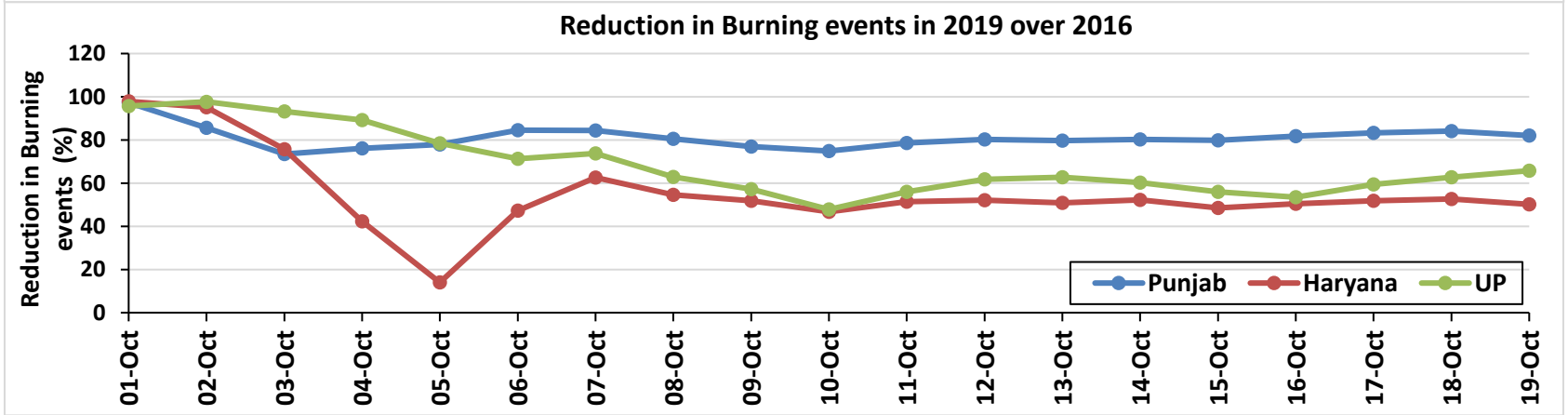
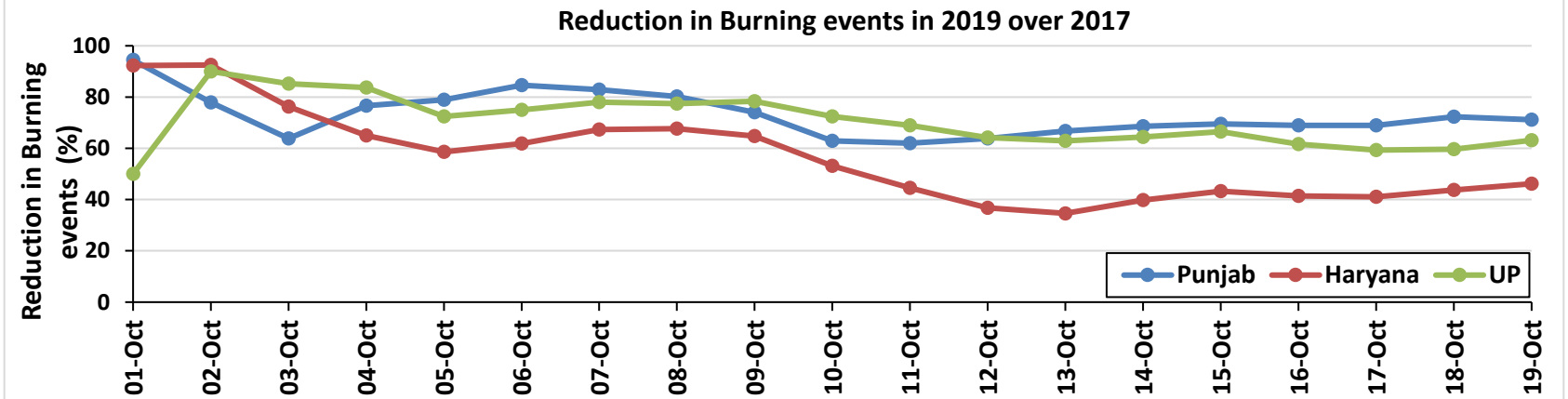
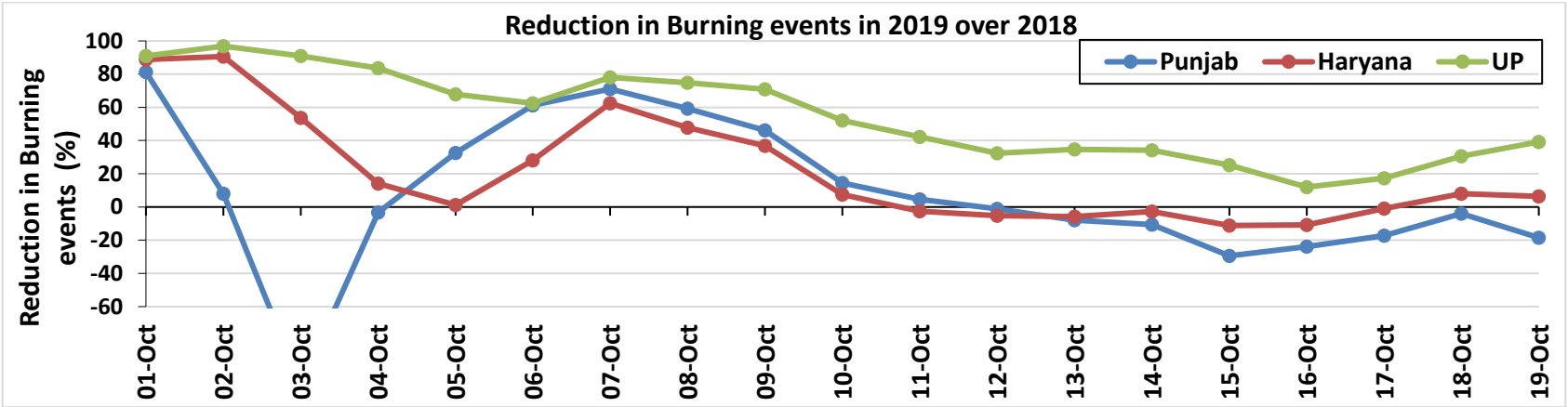


Comparison of residue burning events in current year (2019) with previous years (2018, 2017 & 2016) for the three study States

(01-Oct to 19-Oct)

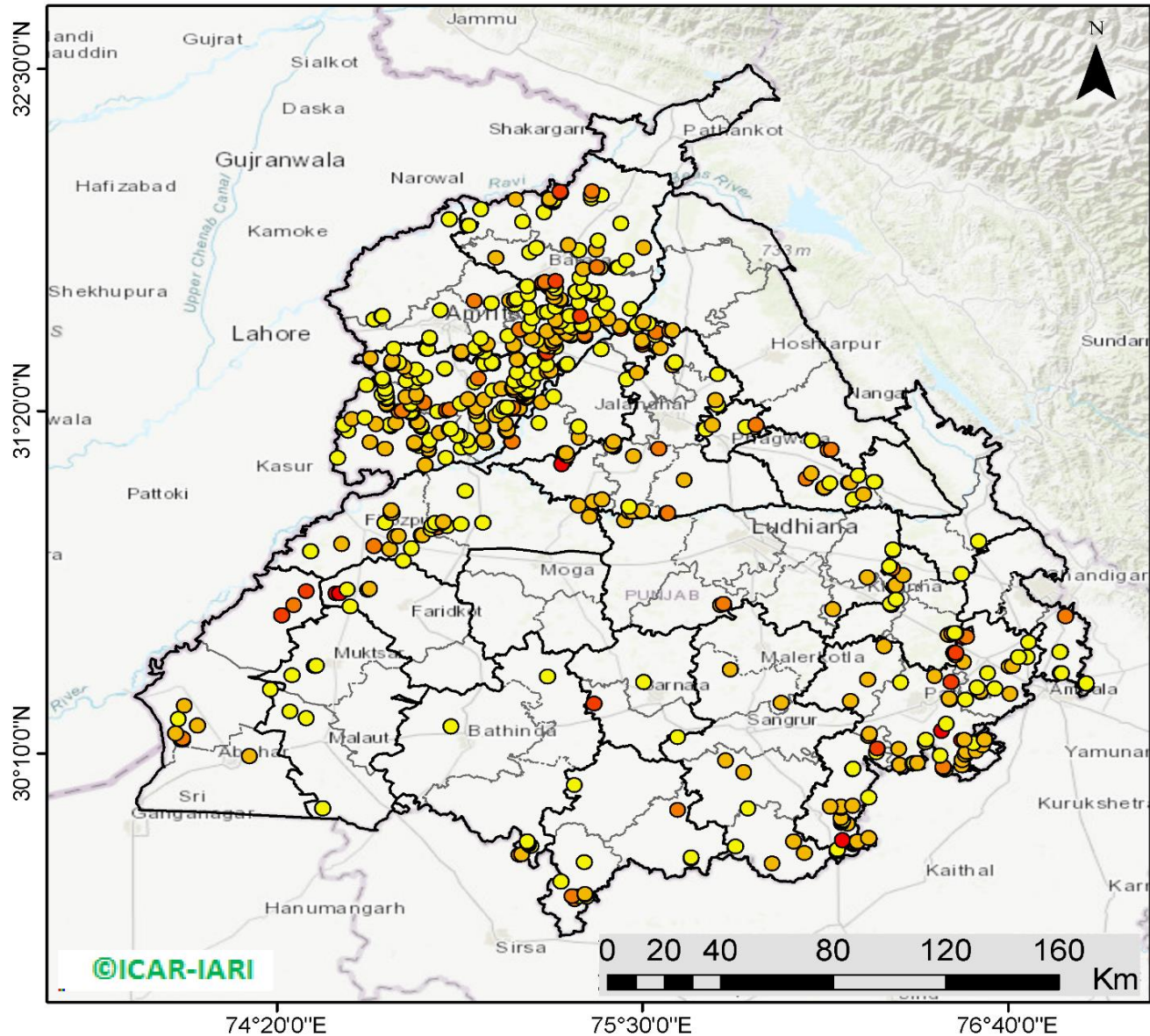


Percent Reduction in Burning events in 2019 over 2018, 2017 and 2016 (Daily Cumulative)



(a) Punjab

RICE RESIDUE BURNING IN PUNJAB



529 burning events detected in Punjab on 19th October 2019

Fire Intensity (W/m²)

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

©ICAR-IARI



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

Details of residue burning events in Punjab on 19-Oct-2019

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	AMRITSAR	AJNALA	S-NPP	74.64316	31.64594	13:54:00	D	3.80
2	AMRITSAR	AJNALA	AQUA	74.66900	31.65700	13:40:00	D	4.30
3	AMRITSAR	AJNALA	S-NPP	74.67088	31.65717	13:54:00	D	2.60
4	AMRITSAR	AJNALA	S-NPP	74.94743	31.96527	13:54:00	D	3.70
5	AMRITSAR	AJNALA	S-NPP	74.88297	31.98775	13:54:00	D	1.90
6	AMRITSAR	AMRITSAR I	S-NPP	74.99527	31.53514	13:54:00	D	1.80
7	AMRITSAR	AMRITSAR I	S-NPP	74.97215	31.54523	13:54:00	D	4.10
8	AMRITSAR	AMRITSAR I	S-NPP	74.96729	31.54889	13:54:00	D	4.10
9	AMRITSAR	AMRITSAR I	AQUA	75.08800	31.55300	13:40:00	D	5.10
10	AMRITSAR	AMRITSAR I	S-NPP	75.08852	31.55741	13:54:00	D	6.40
11	AMRITSAR	AMRITSAR I	AQUA	75.00100	31.55800	13:40:00	D	8.70
12	AMRITSAR	AMRITSAR I	S-NPP	75.00472	31.56118	13:54:00	D	6.10
13	AMRITSAR	AMRITSAR I	S-NPP	74.98468	31.57993	13:54:00	D	3.00
14	AMRITSAR	AMRITSAR I	S-NPP	75.07091	31.58912	13:54:00	D	2.70
15	AMRITSAR	AMRITSAR I	S-NPP	75.09248	31.69411	13:54:00	D	2.10
16	AMRITSAR	AMRITSAR I	S-NPP	75.07711	31.70929	13:54:00	D	6.70
17	AMRITSAR	AMRITSAR I	AQUA	75.09200	31.71100	13:40:00	D	12.00
18	AMRITSAR	AMRITSAR I	S-NPP	75.09836	31.71576	13:54:00	D	3.60
19	AMRITSAR	AMRITSAR II	AQUA	74.92000	31.52800	13:40:00	D	10.70
20	AMRITSAR	AMRITSAR II	S-NPP	74.92215	31.53166	13:54:00	D	5.30
21	AMRITSAR	AMRITSAR II	S-NPP	74.92157	31.53576	13:54:00	D	5.30
22	AMRITSAR	AMRITSAR II	S-NPP	74.70740	31.54590	13:54:00	D	4.90
23	AMRITSAR	AMRITSAR II	S-NPP	74.82120	31.57890	13:54:00	D	2.90
24	AMRITSAR	AMRITSAR II	S-NPP	74.82116	31.58248	13:54:00	D	7.20
25	AMRITSAR	AMRITSAR II	S-NPP	74.82063	31.58298	13:54:00	D	2.90
26	AMRITSAR	AMRITSAR II	S-NPP	74.85493	31.67714	13:54:00	D	1.70
27	AMRITSAR	AMRITSAR II	AQUA	75.01900	31.70000	13:40:00	D	5.00
28	AMRITSAR	AMRITSAR II	S-NPP	74.96348	31.70762	13:54:00	D	11.90
29	AMRITSAR	BABA BAKALA	S-NPP	75.18981	31.52994	13:54:00	D	11.30
30	AMRITSAR	BABA BAKALA	AQUA	75.18400	31.53000	13:40:00	D	53.00

31	AMRITSAR	BABA BAKALA	AQUA	75.19500	31.53200	13:40:00	D	17.90
32	AMRITSAR	BABA BAKALA	S-NPP	75.22277	31.55018	13:54:00	D	3.40
33	AMRITSAR	BABA BAKALA	S-NPP	75.20455	31.55254	13:54:00	D	4.30
34	AMRITSAR	BABA BAKALA	S-NPP	75.19077	31.55535	13:54:00	D	6.00
35	AMRITSAR	BABA BAKALA	AQUA	75.21500	31.56300	13:40:00	D	10.20
36	AMRITSAR	BABA BAKALA	AQUA	75.21300	31.57100	13:40:00	D	7.30
37	AMRITSAR	BABA BAKALA	S-NPP	75.16153	31.57342	13:54:00	D	2.70
38	AMRITSAR	BABA BAKALA	S-NPP	75.22320	31.57982	13:54:00	D	7.10
39	AMRITSAR	BABA BAKALA	AQUA	75.14700	31.58000	13:40:00	D	5.30
40	AMRITSAR	BABA BAKALA	AQUA	75.31800	31.58700	13:40:00	D	10.70
41	AMRITSAR	BABA BAKALA	S-NPP	75.27140	31.58904	13:54:00	D	2.40
42	AMRITSAR	BABA BAKALA	S-NPP	75.27084	31.59322	13:54:00	D	3.80
43	AMRITSAR	BABA BAKALA	S-NPP	75.31602	31.59365	13:54:00	D	11.60
44	AMRITSAR	BABA BAKALA	S-NPP	75.25693	31.59602	13:54:00	D	6.70
45	AMRITSAR	BABA BAKALA	S-NPP	75.26138	31.59648	13:54:00	D	6.60
46	AMRITSAR	BABA BAKALA	AQUA	75.19600	31.60500	13:40:00	D	6.00
47	AMRITSAR	BABA BAKALA	S-NPP	75.11211	31.61030	13:54:00	D	10.30
48	AMRITSAR	BABA BAKALA	S-NPP	75.10831	31.61167	13:54:00	D	10.30
49	AMRITSAR	BABA BAKALA	AQUA	75.27900	31.61800	13:40:00	D	5.30
50	AMRITSAR	BABA BAKALA	S-NPP	75.23576	31.61922	13:54:00	D	4.50
51	AMRITSAR	BABA BAKALA	S-NPP	75.23657	31.62027	13:54:00	D	6.10
52	AMRITSAR	BABA BAKALA	AQUA	75.31000	31.62200	13:40:00	D	5.80
53	AMRITSAR	BABA BAKALA	S-NPP	75.26685	31.62250	13:54:00	D	3.80
54	AMRITSAR	BABA BAKALA	S-NPP	75.13779	31.62305	13:54:00	D	3.40
55	AMRITSAR	BABA BAKALA	S-NPP	75.30700	31.62673	13:54:00	D	2.90
56	AMRITSAR	BABA BAKALA	AQUA	75.34200	31.62700	13:40:00	D	6.20
57	AMRITSAR	BABA BAKALA	S-NPP	75.30798	31.62733	13:54:00	D	3.80
58	AMRITSAR	BABA BAKALA	AQUA	75.23200	31.63800	13:40:00	D	4.60
59	AMRITSAR	BABA BAKALA	AQUA	75.24200	31.64000	13:40:00	D	5.00
60	AMRITSAR	BABA BAKALA	S-NPP	75.22425	31.64443	13:54:00	D	7.00
61	AMRITSAR	BABA BAKALA	S-NPP	75.14751	31.64931	13:54:00	D	2.90
62	AMRITSAR	BABA BAKALA	AQUA	75.29300	31.65600	13:40:00	D	9.80
63	AMRITSAR	BABA BAKALA	S-NPP	75.26761	31.65727	13:54:00	D	3.20
64	AMRITSAR	BABA BAKALA	AQUA	75.30300	31.65800	13:40:00	D	17.80

65	AMRITSAR	BABA BAKALA	AQUA	75.18700	31.66900	13:40:00	D	4.90
66	AMRITSAR	BABA BAKALA	AQUA	75.19700	31.67100	13:40:00	D	4.70
67	AMRITSAR	BABA BAKALA	S-NPP	75.13796	31.68625	13:54:00	D	2.70
68	AMRITSAR	BABA BAKALA	S-NPP	75.22296	31.68663	13:54:00	D	4.30
69	AMRITSAR	BABA BAKALA	S-NPP	75.13641	31.73350	13:54:00	D	3.00
70	BARNALA	BARNALA	S-NPP	75.50451	30.41027	13:54:00	D	3.10
71	BARNALA	TAPPA	S-NPP	75.61331	30.22095	13:54:00	D	2.70
72	BARNALA	TAPPA	AQUA	75.34600	30.33600	13:40:00	D	18.00
73	BATHINDA	BATHINDA	AQUA	74.88900	30.25800	13:40:00	D	4.90
74	BATHINDA	RAMPURA PHUL	S-NPP	75.19671	30.42803	13:54:00	D	1.70
75	BATHINDA	TALWANDI SABO	AQUA	75.10600	29.82000	13:40:00	D	13.50
76	BATHINDA	TALWANDI SABO	AQUA	75.11600	29.82200	13:40:00	D	8.10
77	BATHINDA	TALWANDI SABO	S-NPP	75.14336	29.85042	13:54:00	D	2.60
78	BATHINDA	TALWANDI SABO	S-NPP	75.13813	29.85809	13:54:00	D	7.00
79	BATHINDA	TALWANDI SABO	S-NPP	75.13348	29.86171	13:54:00	D	2.80
80	BATHINDA	TALWANDI SABO	S-NPP	75.13291	29.86577	13:54:00	D	2.80
81	FARIDKOT	FARIDKOT	S-NPP	74.56786	30.66687	13:54:00	D	3.80
82	FARIDKOT	FARIDKOT	AQUA	74.52300	30.71100	13:40:00	D	36.20
83	FARIDKOT	FARIDKOT	AQUA	74.53300	30.71200	13:40:00	D	34.40
84	FARIDKOT	FARIDKOT	S-NPP	74.62415	30.72370	13:54:00	D	3.00
85	FARIDKOT	FARIDKOT	S-NPP	74.55772	30.72458	13:54:00	D	3.00
86	FARIDKOT	FARIDKOT	S-NPP	74.62952	30.72833	13:54:00	D	9.30
87	FARIDKOT	FARIDKOT	S-NPP	74.73724	30.82146	13:54:00	D	3.40
88	FARIDKOT	FARIDKOT	S-NPP	74.73710	30.82223	13:54:00	D	2.50
89	FATEHGARH SAHIB	ALMOH	S-NPP	76.29223	30.67095	13:54:00	D	4.30
90	FATEHGARH SAHIB	ALMOH	S-NPP	76.29395	30.67129	13:54:00	D	5.00
91	FATEHGARH SAHIB	ALMOH	S-NPP	76.29168	30.67534	13:54:00	D	3.60
92	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.49398	30.50876	13:54:00	D	16.10
93	FATEHGARH SAHIB	FATEHGARH SAHIB	AQUA	76.52300	30.56100	13:40:00	D	43.10
94	FATEHGARH SAHIB	FATEHGARH SAHIB	AQUA	76.53300	30.56300	13:40:00	D	14.30
95	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.47800	30.56843	13:54:00	D	5.20
96	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.47617	30.56993	13:54:00	D	6.00
97	FATEHGARH SAHIB	FATEHGARH SAHIB	AQUA	76.48800	30.57500	13:40:00	D	13.50
98	FATEHGARH SAHIB	FATEHGARH SAHIB	AQUA	76.49900	30.57600	13:40:00	D	7.50

99	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.49571	30.57638	13:54:00	D	2.90
100	FATEHGARH SAHIB	KHAMANOH	S-NPP	76.30850	30.73932	13:54:00	D	6.90
101	FATEHGARH SAHIB	KHAMANOH	AQUA	76.33200	30.77400	13:40:00	D	6.40
102	FATEHGARH SAHIB	KHAMANOH	S-NPP	76.29796	30.79538	13:54:00	D	12.80
103	FATEHGARH SAHIB	KHAMANOH	AQUA	76.28900	30.80400	13:40:00	D	4.30
104	FAZILKA	ABOHAR	AQUA	74.24600	30.15800	13:40:00	D	5.50
105	FAZILKA	FAZILKA	S-NPP	74.02756	30.21188	13:54:00	D	14.70
106	FAZILKA	FAZILKA	S-NPP	74.03300	30.21252	13:54:00	D	14.70
107	FAZILKA	FAZILKA	S-NPP	74.03038	30.21427	13:54:00	D	42.00
108	FAZILKA	FAZILKA	S-NPP	74.03242	30.21635	13:54:00	D	14.70
109	FAZILKA	FAZILKA	S-NPP	74.01058	30.23540	13:54:00	D	5.90
110	FAZILKA	FAZILKA	AQUA	74.08000	30.26200	13:40:00	D	5.10
111	FAZILKA	FAZILKA	S-NPP	74.01997	30.28328	13:54:00	D	3.80
112	FAZILKA	FAZILKA	AQUA	74.03800	30.32900	13:40:00	D	7.70
113	FAZILKA	FAZILKA	S-NPP	74.31302	30.38441	13:54:00	D	3.70
114	FAZILKA	JALALABAD	AQUA	74.34900	30.63700	13:40:00	D	17.90
115	FAZILKA	JALALABAD	AQUA	74.38700	30.67100	13:40:00	D	10.90
116	FAZILKA	JALALABAD	S-NPP	74.42760	30.71836	13:54:00	D	16.80
117	FIROZPUR	FIROZPUR	S-NPP	74.44091	30.85482	13:54:00	D	3.80
118	FIROZPUR	FIROZPUR	S-NPP	74.69345	30.86238	13:54:00	D	5.30
119	FIROZPUR	FIROZPUR	S-NPP	74.76377	30.86590	13:54:00	D	2.60
120	FIROZPUR	FIROZPUR	S-NPP	74.64298	30.87313	13:54:00	D	14.00
121	FIROZPUR	FIROZPUR	AQUA	74.54100	30.88000	13:40:00	D	8.40
122	FIROZPUR	FIROZPUR	S-NPP	74.71696	30.90570	13:54:00	D	3.30
123	FIROZPUR	FIROZPUR	AQUA	74.71200	30.90600	13:40:00	D	8.80
124	FIROZPUR	FIROZPUR	AQUA	74.72200	30.90700	13:40:00	D	6.70
125	FIROZPUR	FIROZPUR	S-NPP	74.79469	30.91017	13:54:00	D	3.80
126	FIROZPUR	FIROZPUR	S-NPP	74.79877	30.91062	13:54:00	D	7.50
127	FIROZPUR	FIROZPUR	S-NPP	74.82509	30.92992	13:54:00	D	3.50
128	FIROZPUR	FIROZPUR	S-NPP	74.67796	30.95160	13:54:00	D	2.80
129	FIROZPUR	FIROZPUR	S-NPP	74.69761	30.98632	13:54:00	D	5.60
130	FIROZPUR	FIROZPUR	S-NPP	74.70165	30.98676	13:54:00	D	5.60
131	FIROZPUR	FIROZPUR	AQUA	74.69800	30.99500	13:40:00	D	8.10
132	FIROZPUR	ZIRA	AQUA	74.84700	30.93500	13:40:00	D	12.20

133	FIROZPUR	ZIRA	S-NPP	74.87801	30.93987	13:54:00	D	3.20
134	FIROZPUR	ZIRA	S-NPP	74.83157	30.94296	13:54:00	D	2.80
135	FIROZPUR	ZIRA	S-NPP	74.82795	30.94299	13:54:00	D	2.90
136	FIROZPUR	ZIRA	AQUA	74.92100	30.94700	13:40:00	D	4.90
137	FIROZPUR	ZIRA	S-NPP	74.85619	30.95005	13:54:00	D	8.20
138	FIROZPUR	ZIRA	S-NPP	74.86031	30.95049	13:54:00	D	6.80
139	FIROZPUR	ZIRA	S-NPP	74.99026	30.95220	13:54:00	D	1.20
140	FIROZPUR	ZIRA	S-NPP	74.83913	30.95237	13:54:00	D	4.80
141	FIROZPUR	ZIRA	S-NPP	74.86386	30.95497	13:54:00	D	6.80
142	FIROZPUR	ZIRA	S-NPP	75.33076	30.97212	13:54:00	D	5.70
143	FIROZPUR	ZIRA	AQUA	75.29500	31.01100	13:40:00	D	5.70
144	FIROZPUR	ZIRA	S-NPP	74.93446	31.06071	13:54:00	D	2.20
145	GURDASPUR	BATALA	S-NPP	75.39191	31.64840	13:54:00	D	8.60
146	GURDASPUR	BATALA	S-NPP	75.36527	31.67563	13:54:00	D	1.80
147	GURDASPUR	BATALA	S-NPP	75.46140	31.68097	13:54:00	D	3.60
148	GURDASPUR	BATALA	S-NPP	75.38506	31.69898	13:54:00	D	2.30
149	GURDASPUR	BATALA	AQUA	75.29800	31.70400	13:40:00	D	4.50
150	GURDASPUR	BATALA	S-NPP	75.23788	31.70936	13:54:00	D	5.10
151	GURDASPUR	BATALA	S-NPP	75.23732	31.71354	13:54:00	D	5.10
152	GURDASPUR	BATALA	AQUA	75.21900	31.72000	13:40:00	D	7.20
153	GURDASPUR	BATALA	S-NPP	75.34431	31.72895	13:54:00	D	7.00
154	GURDASPUR	BATALA	AQUA	75.34600	31.73000	13:40:00	D	7.70
155	GURDASPUR	BATALA	AQUA	75.21600	31.73800	13:40:00	D	5.70
156	GURDASPUR	BATALA	S-NPP	75.36204	31.73892	13:54:00	D	3.00
157	GURDASPUR	BATALA	S-NPP	75.28809	31.74011	13:54:00	D	4.50
158	GURDASPUR	BATALA	S-NPP	75.28870	31.74023	13:54:00	D	4.60
159	GURDASPUR	BATALA	S-NPP	75.33882	31.74091	13:54:00	D	3.50
160	GURDASPUR	BATALA	S-NPP	75.33809	31.74110	13:54:00	D	2.40
161	GURDASPUR	BATALA	S-NPP	75.22379	31.75074	13:54:00	D	3.00
162	GURDASPUR	BATALA	S-NPP	75.31454	31.75130	13:54:00	D	2.60
163	GURDASPUR	BATALA	S-NPP	75.13296	31.75844	13:54:00	D	2.10
164	GURDASPUR	BATALA	S-NPP	75.21317	31.76237	13:54:00	D	4.60
165	GURDASPUR	BATALA	AQUA	75.18200	31.77000	13:40:00	D	15.40
166	GURDASPUR	BATALA	AQUA	75.19200	31.77100	13:40:00	D	16.20

167	GURDASPUR	BATALA	S-NPP	75.18925	31.77264	13:54:00	D	10.30
168	GURDASPUR	BATALA	AQUA	75.22400	31.77600	13:40:00	D	15.10
169	GURDASPUR	BATALA	S-NPP	75.30036	31.78820	13:54:00	D	4.40
170	GURDASPUR	BATALA	AQUA	75.31200	31.81600	13:40:00	D	8.40
171	GURDASPUR	BATALA	S-NPP	75.36480	31.82038	13:54:00	D	5.10
172	GURDASPUR	BATALA	AQUA	75.35400	31.82200	13:40:00	D	6.40
173	GURDASPUR	BATALA	S-NPP	75.35516	31.82366	13:54:00	D	10.80
174	GURDASPUR	BATALA	S-NPP	75.03173	31.85492	13:54:00	D	6.60
175	GURDASPUR	BATALA	S-NPP	75.14039	31.87448	13:54:00	D	3.40
176	GURDASPUR	BATALA	S-NPP	75.16081	31.88925	13:54:00	D	4.00
177	GURDASPUR	DERA BABA NANAK	S-NPP	74.94310	31.96481	13:54:00	D	3.20
178	GURDASPUR	DERA BABA NANAK	S-NPP	75.11882	31.97870	13:54:00	D	1.90
179	GURDASPUR	DERA BABA NANAK	S-NPP	74.98463	32.02149	13:54:00	D	2.60
180	GURDASPUR	DERA BABA NANAK	S-NPP	75.09613	32.05370	13:54:00	D	7.10
181	GURDASPUR	GURDASPUR	S-NPP	75.42007	31.82174	13:54:00	D	2.80
182	GURDASPUR	GURDASPUR	S-NPP	75.42464	31.82221	13:54:00	D	5.00
183	GURDASPUR	GURDASPUR	S-NPP	75.44932	31.84620	13:54:00	D	4.30
184	GURDASPUR	GURDASPUR	S-NPP	75.29805	31.88197	13:54:00	D	2.70
185	GURDASPUR	GURDASPUR	S-NPP	75.35300	31.88321	13:54:00	D	5.40
186	GURDASPUR	GURDASPUR	AQUA	75.50500	31.89100	13:40:00	D	5.80
187	GURDASPUR	GURDASPUR	S-NPP	75.26361	31.89978	13:54:00	D	6.00
188	GURDASPUR	GURDASPUR	S-NPP	75.35811	31.91366	13:54:00	D	5.00
189	GURDASPUR	GURDASPUR	S-NPP	75.43137	31.97152	13:54:00	D	1.00
190	GURDASPUR	GURDASPUR	S-NPP	75.18663	32.01105	13:54:00	D	4.50
191	GURDASPUR	GURDASPUR	AQUA	75.21500	32.04300	13:40:00	D	5.00
192	GURDASPUR	GURDASPUR	S-NPP	75.21349	32.04781	13:54:00	D	2.40
193	GURDASPUR	GURDASPUR	AQUA	75.20300	32.05000	13:40:00	D	5.50
194	GURDASPUR	GURDASPUR	S-NPP	75.20393	32.05107	13:54:00	D	10.70
195	GURDASPUR	GURDASPUR	S-NPP	75.20499	32.05182	13:54:00	D	9.00
196	GURDASPUR	GURDASPUR	S-NPP	75.21741	32.05248	13:54:00	D	2.40
197	GURDASPUR	GURDASPUR	S-NPP	75.20442	32.05601	13:54:00	D	9.00
198	GURDASPUR	GURDASPUR	S-NPP	75.33765	32.05627	13:54:00	D	2.20
199	GURDASPUR	GURDASPUR	S-NPP	75.36719	32.06812	13:54:00	D	4.30
200	GURDASPUR	GURDASPUR	S-NPP	75.33594	32.06894	13:54:00	D	7.70

201	GURDASPUR	GURDASPUR	S-NPP	75.23816	32.07637	13:54:00	D	11.00
202	GURDASPUR	GURDASPUR	S-NPP	75.23759	32.08057	13:54:00	D	15.30
203	GURDASPUR	GURDASPUR	S-NPP	75.33881	32.08207	13:54:00	D	12.60
204	HOSHIARPUR	DASUYA	AQUA	75.58700	31.60700	13:40:00	D	10.90
205	HOSHIARPUR	DASUYA	AQUA	75.59700	31.60900	13:40:00	D	6.10
206	HOSHIARPUR	GARHSHANKAR	AQUA	76.09200	31.20000	13:40:00	D	10.60
207	HOSHIARPUR	GARHSHANKAR	AQUA	76.10300	31.20200	13:40:00	D	12.60
208	JALANDHAR	JALANDHAR I	S-NPP	75.73883	31.35228	13:54:00	D	1.40
209	JALANDHAR	JALANDHAR I	S-NPP	75.73267	31.37100	13:54:00	D	5.90
210	JALANDHAR	JALANDHAR II	S-NPP	75.44910	31.44112	13:54:00	D	2.60
211	JALANDHAR	JALANDHAR II	S-NPP	75.74011	31.45867	13:54:00	D	2.20
212	JALANDHAR	JALANDHAR II	AQUA	75.48300	31.46300	13:40:00	D	5.40
213	JALANDHAR	JALANDHAR II	AQUA	75.59600	31.48900	13:40:00	D	9.60
214	JALANDHAR	JALANDHAR II	AQUA	75.60400	31.49900	13:40:00	D	4.70
215	JALANDHAR	JALANDHAR II	S-NPP	75.60374	31.49947	13:54:00	D	5.00
216	JALANDHAR	NAKODAR	AQUA	75.45900	30.99000	13:40:00	D	7.00
217	JALANDHAR	NAKODAR	AQUA	75.46900	30.99100	13:40:00	D	8.20
218	JALANDHAR	NAKODAR	S-NPP	75.49846	30.99404	13:54:00	D	6.10
219	JALANDHAR	NAKODAR	S-NPP	75.45715	31.00730	13:54:00	D	3.10
220	JALANDHAR	NAKODAR	S-NPP	75.47211	31.17924	13:54:00	D	6.90
221	JALANDHAR	NAKODAR	S-NPP	75.55122	31.20452	13:54:00	D	12.80
222	JALANDHAR	NAKODAR	S-NPP	75.40877	31.21099	13:54:00	D	2.30
223	JALANDHAR	NAKODAR	S-NPP	75.40982	31.21158	13:54:00	D	2.60
224	JALANDHAR	NAKODAR	S-NPP	75.40373	31.21471	13:54:00	D	7.70
225	JALANDHAR	NAKODAR	S-NPP	75.40030	31.21488	13:54:00	D	7.70
226	JALANDHAR	NAKODAR	S-NPP	75.40753	31.22836	13:54:00	D	7.40
227	JALANDHAR	PHILLAUR	S-NPP	75.57722	30.98513	13:54:00	D	6.80
228	JALANDHAR	PHILLAUR	S-NPP	75.58174	30.98560	13:54:00	D	10.30
229	JALANDHAR	PHILLAUR	AQUA	75.63400	31.09800	13:40:00	D	8.50
230	JALANDHAR	SHAHKOT	S-NPP	75.34239	31.02541	13:54:00	D	5.70
231	JALANDHAR	SHAHKOT	AQUA	75.37000	31.03200	13:40:00	D	8.20
232	JALANDHAR	SHAHKOT	AQUA	75.24300	31.15200	13:40:00	D	20.30
233	KAPURTHALA	BHOLATH	AQUA	75.55600	31.54800	13:40:00	D	6.30
234	KAPURTHALA	BHOLATH	AQUA	75.50000	31.55800	13:40:00	D	11.40

235	KAPURTHALA	BHOLATH	AQUA	75.49800	31.56700	13:40:00	D	35.00
236	KAPURTHALA	BHOLATH	S-NPP	75.49796	31.57361	13:54:00	D	5.40
237	KAPURTHALA	BHOLATH	S-NPP	75.54224	31.59092	13:54:00	D	3.60
238	KAPURTHALA	BHOLATH	AQUA	75.54500	31.60100	13:40:00	D	11.00
239	KAPURTHALA	BHOLATH	S-NPP	75.43233	31.61415	13:54:00	D	25.40
240	KAPURTHALA	BHOLATH	AQUA	75.48200	31.62000	13:40:00	D	4.60
241	KAPURTHALA	BHOLATH	AQUA	75.42800	31.62100	13:40:00	D	5.80
242	KAPURTHALA	BHOLATH	S-NPP	75.48139	31.62776	13:54:00	D	3.80
243	KAPURTHALA	BHOLATH	S-NPP	75.51814	31.63153	13:54:00	D	3.90
244	KAPURTHALA	BHOLATH	S-NPP	75.50320	31.63861	13:54:00	D	6.20
245	KAPURTHALA	KAPURTHALA	S-NPP	75.29692	31.28068	13:54:00	D	4.00
246	KAPURTHALA	KAPURTHALA	AQUA	75.17700	31.36300	13:40:00	D	5.20
247	KAPURTHALA	KAPURTHALA	S-NPP	75.21652	31.38286	13:54:00	D	4.90
248	KAPURTHALA	KAPURTHALA	S-NPP	75.36848	31.54362	13:54:00	D	4.20
249	KAPURTHALA	PHAGWARA	S-NPP	75.70232	31.27053	13:54:00	D	3.40
250	KAPURTHALA	PHAGWARA	S-NPP	75.82961	31.27865	13:54:00	D	2.90
251	KAPURTHALA	PHAGWARA	AQUA	75.72300	31.28600	13:40:00	D	5.10
252	KAPURTHALA	PHAGWARA	S-NPP	75.86224	31.28620	13:54:00	D	11.20
253	KAPURTHALA	SULTANPUR LODHI	AQUA	75.25900	31.18100	13:40:00	D	9.90
254	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.25047	31.18995	13:54:00	D	3.80
255	KAPURTHALA	SULTANPUR LODHI	AQUA	75.25700	31.19000	13:40:00	D	5.10
256	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.08348	31.22889	13:54:00	D	11.30
257	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.29762	31.24268	13:54:00	D	9.40
258	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.17098	31.29264	13:54:00	D	2.00
259	LUDHIANA	JAGRAON	AQUA	75.44400	30.96000	13:40:00	D	5.50
260	LUDHIANA	KHANNA	AQUA	76.10700	30.65800	13:40:00	D	8.80
261	LUDHIANA	KHANNA	S-NPP	76.30973	30.69042	13:54:00	D	3.80
262	LUDHIANA	RAIKOT	AQUA	75.74900	30.67200	13:40:00	D	7.20
263	LUDHIANA	RAIKOT	AQUA	75.75900	30.67400	13:40:00	D	10.90
264	LUDHIANA	RAIKOT	S-NPP	75.75820	30.67527	13:54:00	D	11.70
265	LUDHIANA	SAMRALA	AQUA	76.21700	30.76700	13:40:00	D	5.70
266	LUDHIANA	SAMRALA	S-NPP	76.30009	30.85802	13:54:00	D	2.20
267	LUDHIANA	SAMRALA	AQUA	76.29900	30.86100	13:40:00	D	4.30
268	MANSA	BUDHLADA	S-NPP	75.65582	29.80686	13:54:00	D	5.00

269	MANSA	BUDHLADA	S-NPP	75.65526	29.81105	13:54:00	D	2.70
270	MANSA	BUDHLADA	S-NPP	75.61279	29.97353	13:54:00	D	12.60
271	MANSA	MANSA	S-NPP	75.28379	30.05843	13:54:00	D	2.50
272	MANSA	SARDULGARH	S-NPP	75.28530	29.66852	13:54:00	D	13.60
273	MANSA	SARDULGARH	S-NPP	75.32214	29.67668	13:54:00	D	4.20
274	MANSA	SARDULGARH	S-NPP	75.29662	29.67805	13:54:00	D	2.60
275	MANSA	SARDULGARH	S-NPP	75.27533	29.67986	13:54:00	D	4.00
276	MANSA	SARDULGARH	AQUA	75.27500	29.68000	13:40:00	D	14.30
277	MANSA	SARDULGARH	S-NPP	75.31686	29.68442	13:54:00	D	6.60
278	MANSA	SARDULGARH	AQUA	75.31700	29.68600	13:40:00	D	6.40
279	MANSA	SARDULGARH	S-NPP	75.23952	29.72924	13:54:00	D	2.90
280	MANSA	SARDULGARH	S-NPP	75.31474	29.79546	13:54:00	D	2.30
281	MUKTSAR	MALAUT	S-NPP	74.47916	29.97893	13:54:00	D	2.60
282	MUKTSAR	MALAUT	S-NPP	74.42835	30.28651	13:54:00	D	3.50
283	MUKTSAR	MALAUT	AQUA	74.37600	30.30900	13:40:00	D	4.80
284	MUKTSAR	MUKTSAR	S-NPP	74.38124	30.43186	13:54:00	D	2.90
285	MUKTSAR	MUKTSAR	S-NPP	74.45731	30.46368	13:54:00	D	6.50
286	MUKTSAR	MUKTSAR	S-NPP	74.45246	30.46394	13:54:00	D	4.60
287	MUKTSAR	MUKTSAR	S-NPP	74.45823	30.46460	13:54:00	D	4.60
288	NAWASHAHR	BALACHAUR	S-NPP	76.24161	31.09192	13:54:00	D	2.40
289	NAWASHAHR	BALACHAUR	S-NPP	76.23940	31.09194	13:54:00	D	3.50
290	NAWASHAHR	NAWASHAHR	S-NPP	76.17223	31.03189	13:54:00	D	2.50
291	NAWASHAHR	NAWASHAHR	S-NPP	76.20486	31.04842	13:54:00	D	6.40
292	NAWASHAHR	NAWASHAHR	AQUA	76.08100	31.07000	13:40:00	D	7.20
293	NAWASHAHR	NAWASHAHR	S-NPP	76.07823	31.07122	13:54:00	D	5.20
294	NAWASHAHR	NAWASHAHR	S-NPP	76.08308	31.07171	13:54:00	D	9.60
295	NAWASHAHR	NAWASHAHR	S-NPP	76.08010	31.07224	13:54:00	D	8.90
296	NAWASHAHR	NAWASHAHR	S-NPP	76.09789	31.08718	13:54:00	D	4.60
297	NAWASHAHR	NAWASHAHR	S-NPP	76.15713	31.08839	13:54:00	D	8.60
298	NAWASHAHR	NAWASHAHR	S-NPP	76.16205	31.08886	13:54:00	D	8.60
299	NAWASHAHR	NAWASHAHR	S-NPP	76.02239	31.10195	13:54:00	D	13.30
300	NAWASHAHR	NAWASHAHR	S-NPP	76.18880	31.11361	13:54:00	D	2.60
301	NAWASHAHR	NAWASHAHR	S-NPP	76.03947	31.12124	13:54:00	D	8.50
302	NAWASHAHR	NAWASHAHR	S-NPP	76.04258	31.23230	13:54:00	D	3.40

303	NAWASHAHR	NAWASHAHR	AQUA	75.85800	31.27800	13:40:00	D	8.90
304	PATIALA	NABHA	AQUA	76.16400	30.34500	13:40:00	D	5.70
305	PATIALA	NABHA	AQUA	76.21800	30.41700	13:40:00	D	7.30
306	PATIALA	NABHA	S-NPP	76.27070	30.53156	13:54:00	D	9.00
307	PATIALA	PATIALA	S-NPP	76.46466	30.11161	13:54:00	D	3.00
308	PATIALA	PATIALA	S-NPP	76.45919	30.11553	13:54:00	D	11.40
309	PATIALA	PATIALA	S-NPP	76.45865	30.11995	13:54:00	D	11.40
310	PATIALA	PATIALA	S-NPP	76.52293	30.12634	13:54:00	D	2.30
311	PATIALA	PATIALA	AQUA	76.51900	30.12700	13:40:00	D	8.00
312	PATIALA	PATIALA	S-NPP	76.31927	30.12811	13:54:00	D	4.50
313	PATIALA	PATIALA	S-NPP	76.32063	30.12827	13:54:00	D	6.30
314	PATIALA	PATIALA	S-NPP	76.36433	30.13243	13:54:00	D	10.00
315	PATIALA	PATIALA	S-NPP	76.36292	30.13256	13:54:00	D	5.00
316	PATIALA	PATIALA	S-NPP	76.36777	30.13306	13:54:00	D	5.00
317	PATIALA	PATIALA	S-NPP	76.37751	30.13405	13:54:00	D	6.10
318	PATIALA	PATIALA	S-NPP	76.52073	30.14405	13:54:00	D	9.20
319	PATIALA	PATIALA	S-NPP	76.45033	30.15842	13:54:00	D	3.60
320	PATIALA	PATIALA	S-NPP	76.53020	30.16152	13:54:00	D	3.90
321	PATIALA	PATIALA	S-NPP	76.52846	30.16276	13:54:00	D	5.90
322	PATIALA	PATIALA	S-NPP	76.53409	30.17086	13:54:00	D	8.40
323	PATIALA	PATIALA	S-NPP	76.56409	30.17371	13:54:00	D	5.60
324	PATIALA	PATIALA	S-NPP	76.31876	30.18123	13:54:00	D	8.20
325	PATIALA	PATIALA	AQUA	76.58500	30.19300	13:40:00	D	9.80
326	PATIALA	PATIALA	S-NPP	76.55574	30.19988	13:54:00	D	4.00
327	PATIALA	PATIALA	AQUA	76.40300	30.20400	13:40:00	D	4.70
328	PATIALA	PATIALA	AQUA	76.51800	30.21100	13:40:00	D	27.80
329	PATIALA	PATIALA	S-NPP	76.40372	30.21185	13:54:00	D	3.40
330	PATIALA	PATIALA	AQUA	76.52800	30.21200	13:40:00	D	5.30
331	PATIALA	PATIALA	AQUA	76.59200	30.21200	13:40:00	D	7.90
332	PATIALA	PATIALA	S-NPP	76.45455	30.24369	13:54:00	D	22.30
333	PATIALA	PATIALA	AQUA	76.47000	30.26800	13:40:00	D	5.00
334	PATIALA	PATIALA	S-NPP	76.47984	30.34846	13:54:00	D	7.30
335	PATIALA	PATIALA	S-NPP	76.47929	30.35289	13:54:00	D	7.30
336	PATIALA	PATIALA	S-NPP	76.32397	30.40798	13:54:00	D	3.10

337	PATIALA	PATIALA	S-NPP	76.48386	30.41021	13:54:00	D	17.20
338	PATIALA	PATIALA	AQUA	76.43300	30.42900	13:40:00	D	6.90
339	PATIALA	RAJPURA	S-NPP	76.53034	30.34899	13:54:00	D	4.80
340	PATIALA	RAJPURA	AQUA	76.67300	30.37000	13:40:00	D	8.70
341	PATIALA	RAJPURA	AQUA	76.58000	30.37600	13:40:00	D	6.40
342	PATIALA	RAJPURA	S-NPP	76.57935	30.37880	13:54:00	D	5.20
343	PATIALA	RAJPURA	S-NPP	76.62447	30.38754	13:54:00	D	5.00
344	PATIALA	RAJPURA	S-NPP	76.56754	30.39122	13:54:00	D	4.10
345	PATIALA	RAJPURA	S-NPP	76.60252	30.43969	13:54:00	D	2.20
346	PATIALA	RAJPURA	AQUA	76.67000	30.46200	13:40:00	D	5.80
347	PATIALA	RAJPURA	AQUA	76.68100	30.46300	13:40:00	D	6.50
348	PATIALA	RAJPURA	AQUA	76.52400	30.47800	13:40:00	D	5.20
349	PATIALA	RAJPURA	S-NPP	76.72808	30.49450	13:54:00	D	4.10
350	PATIALA	RAJPURA	S-NPP	76.69939	30.49451	13:54:00	D	2.40
351	PATIALA	RAJPURA	AQUA	76.49800	30.50200	13:40:00	D	10.60
352	PATIALA	RAJPURA	S-NPP	76.49901	30.50925	13:54:00	D	16.10
353	PATIALA	RAJPURA	S-NPP	76.73233	30.54503	13:54:00	D	2.20
354	PATIALA	SAMANA	AQUA	76.12100	29.83200	13:40:00	D	6.70
355	PATIALA	SAMANA	S-NPP	76.12285	29.83778	13:54:00	D	2.30
356	PATIALA	SAMANA	AQUA	76.17300	29.85800	13:40:00	D	5.00
357	PATIALA	SAMANA	S-NPP	76.17673	29.86070	13:54:00	D	7.60
358	PATIALA	SAMANA	S-NPP	76.18089	29.86550	13:54:00	D	7.70
359	PATIALA	SAMANA	S-NPP	76.18559	29.86598	13:54:00	D	7.70
360	PATIALA	SAMANA	AQUA	76.13900	29.87100	13:40:00	D	31.70
361	PATIALA	SAMANA	S-NPP	76.22220	29.87848	13:54:00	D	6.30
362	PATIALA	SAMANA	S-NPP	76.15526	29.92561	13:54:00	D	8.60
363	PATIALA	SAMANA	S-NPP	76.13593	29.92806	13:54:00	D	7.10
364	PATIALA	SAMANA	AQUA	76.13700	29.93500	13:40:00	D	10.20
365	PATIALA	SAMANA	S-NPP	76.13950	29.93716	13:54:00	D	4.00
366	PATIALA	SAMANA	S-NPP	76.13368	29.94532	13:54:00	D	7.40
367	PATIALA	SAMANA	S-NPP	76.13390	29.98031	13:54:00	D	2.30
368	PATIALA	SAMANA	S-NPP	76.13335	29.98463	13:54:00	D	5.60
369	PATIALA	SAMANA	AQUA	76.10000	29.98500	13:40:00	D	7.10
370	PATIALA	SAMANA	S-NPP	76.17097	29.98849	13:54:00	D	6.40

371	PATIALA	SAMANA	S-NPP	76.22185	30.01695	13:54:00	D	4.40
372	PATIALA	SAMANA	S-NPP	76.17101	30.11290	13:54:00	D	4.60
373	PATIALA	SAMANA	S-NPP	76.17205	30.11401	13:54:00	D	3.80
374	PATIALA	SAMANA	S-NPP	76.24696	30.16972	13:54:00	D	3.30
375	PATIALA	SAMANA	S-NPP	76.25009	30.18327	13:54:00	D	15.80
376	PATIALA	SAMANA	AQUA	76.22100	30.22400	13:40:00	D	7.90
377	PATIALA	SAMANA	AQUA	76.22400	30.23300	13:40:00	D	7.50
378	RUPNAGAR	CHAMKOR SAHIB	S-NPP	76.51675	30.77774	13:54:00	D	4.70
379	RUPNAGAR	RUPNAGAR	S-NPP	76.57206	30.88923	13:54:00	D	3.40
380	SANGRUR	DHURI	S-NPP	75.94230	30.33936	13:54:00	D	5.90
381	SANGRUR	DHURI	S-NPP	75.77990	30.45137	13:54:00	D	8.60
382	SANGRUR	MOONAK	S-NPP	75.91497	29.79083	13:54:00	D	5.30
383	SANGRUR	MOONAK	AQUA	76.01700	29.82600	13:40:00	D	6.30
384	SANGRUR	MOONAK	AQUA	75.79700	29.84900	13:40:00	D	4.60
385	SANGRUR	MOONAK	AQUA	75.98300	29.86700	13:40:00	D	7.30
386	SANGRUR	SUNAM	S-NPP	75.83732	29.97917	13:54:00	D	3.20
387	SANGRUR	SUNAM	AQUA	75.82300	30.10200	13:40:00	D	9.10
388	SANGRUR	SUNAM	S-NPP	75.76612	30.14273	13:54:00	D	9.60
389	SAS NAGAR	DERABASSI	S-NPP	76.91437	30.40489	13:54:00	D	2.70
390	SAS NAGAR	DERABASSI	S-NPP	76.91653	30.40526	13:54:00	D	3.10
391	SAS NAGAR	DERABASSI	AQUA	76.83400	30.43900	13:40:00	D	5.70
392	SAS NAGAR	DERABASSI	S-NPP	76.83771	30.43933	13:54:00	D	3.40
393	SAS NAGAR	DERABASSI	S-NPP	76.83413	30.51235	13:54:00	D	4.40
394	SAS NAGAR	DERABASSI	S-NPP	76.83139	30.51310	13:54:00	D	2.10
395	SAS NAGAR	DERABASSI	AQUA	76.85000	30.63400	13:40:00	D	13.40
396	TARN TARAN	KHADOOR SAHIB	S-NPP	74.95221	31.21093	13:54:00	D	3.20
397	TARN TARAN	KHADOOR SAHIB	S-NPP	75.00179	31.22447	13:54:00	D	5.90
398	TARN TARAN	KHADOOR SAHIB	AQUA	74.99500	31.23400	13:40:00	D	6.50
399	TARN TARAN	KHADOOR SAHIB	S-NPP	74.94035	31.23455	13:54:00	D	3.00
400	TARN TARAN	KHADOOR SAHIB	S-NPP	74.91703	31.24861	13:54:00	D	2.40
401	TARN TARAN	KHADOOR SAHIB	AQUA	75.06800	31.26400	13:40:00	D	8.20
402	TARN TARAN	KHADOOR SAHIB	S-NPP	75.06483	31.26869	13:54:00	D	8.30
403	TARN TARAN	KHADOOR SAHIB	S-NPP	75.06915	31.26915	13:54:00	D	8.30
404	TARN TARAN	KHADOOR SAHIB	AQUA	74.99000	31.28000	13:40:00	D	4.50

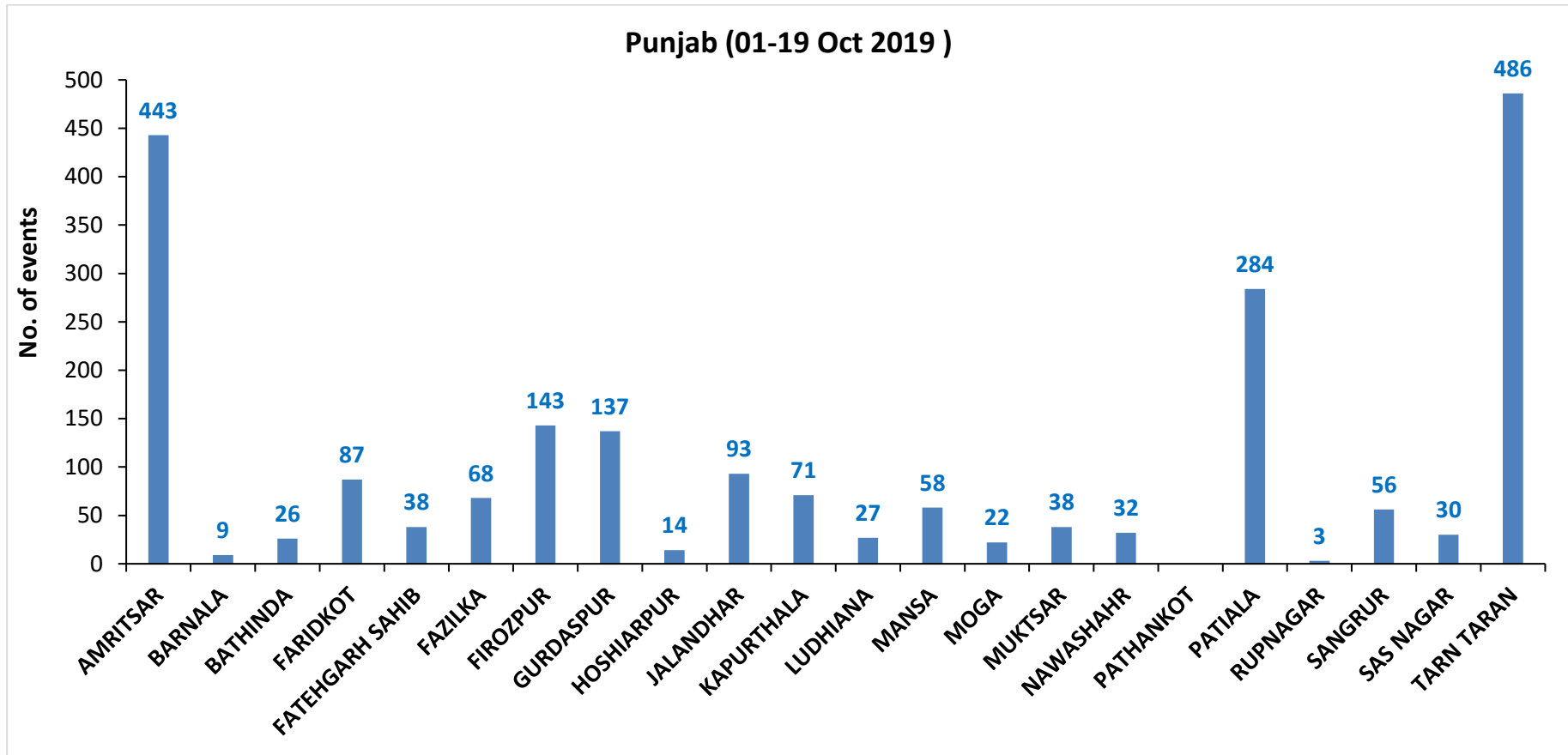
405	TARN TARAN	KHADOOR SAHIB	S-NPP	74.98940	31.28386	13:54:00	D	6.50
406	TARN TARAN	KHADOOR SAHIB	AQUA	75.06300	31.29100	13:40:00	D	5.60
407	TARN TARAN	KHADOOR SAHIB	AQUA	74.97200	31.31400	13:40:00	D	5.00
408	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03226	31.31744	13:54:00	D	8.20
409	TARN TARAN	KHADOOR SAHIB	S-NPP	75.04765	31.33156	13:54:00	D	1.70
410	TARN TARAN	KHADOOR SAHIB	AQUA	74.96800	31.33200	13:40:00	D	6.50
411	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08573	31.33973	13:54:00	D	5.20
412	TARN TARAN	KHADOOR SAHIB	S-NPP	75.09868	31.34109	13:54:00	D	2.40
413	TARN TARAN	KHADOOR SAHIB	AQUA	74.97100	31.34200	13:40:00	D	7.60
414	TARN TARAN	KHADOOR SAHIB	AQUA	75.10600	31.34300	13:40:00	D	6.70
415	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08516	31.34385	13:54:00	D	14.90
416	TARN TARAN	KHADOOR SAHIB	S-NPP	75.05878	31.34526	13:54:00	D	2.20
417	TARN TARAN	KHADOOR SAHIB	S-NPP	75.06738	31.34617	13:54:00	D	4.60
418	TARN TARAN	KHADOOR SAHIB	S-NPP	74.91867	31.35946	13:54:00	D	3.10
419	TARN TARAN	KHADOOR SAHIB	AQUA	74.80400	31.36200	13:40:00	D	10.20
420	TARN TARAN	KHADOOR SAHIB	S-NPP	74.99435	31.37178	13:54:00	D	8.60
421	TARN TARAN	KHADOOR SAHIB	AQUA	74.94300	31.37400	13:40:00	D	7.30
422	TARN TARAN	KHADOOR SAHIB	S-NPP	75.12868	31.37778	13:54:00	D	2.80
423	TARN TARAN	KHADOOR SAHIB	S-NPP	74.77605	31.38094	13:54:00	D	4.90
424	TARN TARAN	KHADOOR SAHIB	AQUA	74.74600	31.38100	13:40:00	D	7.30
425	TARN TARAN	KHADOOR SAHIB	S-NPP	75.12811	31.38192	13:54:00	D	7.10
426	TARN TARAN	KHADOOR SAHIB	S-NPP	75.11829	31.38926	13:54:00	D	4.30
427	TARN TARAN	KHADOOR SAHIB	S-NPP	74.77905	31.38948	13:54:00	D	5.10
428	TARN TARAN	KHADOOR SAHIB	S-NPP	75.11773	31.39340	13:54:00	D	4.30
429	TARN TARAN	KHADOOR SAHIB	S-NPP	75.11825	31.39537	13:54:00	D	6.00
430	TARN TARAN	KHADOOR SAHIB	S-NPP	75.13017	31.39893	13:54:00	D	5.20
431	TARN TARAN	KHADOOR SAHIB	S-NPP	75.13451	31.39939	13:54:00	D	2.70
432	TARN TARAN	KHADOOR SAHIB	S-NPP	75.12636	31.40038	13:54:00	D	6.10
433	TARN TARAN	KHADOOR SAHIB	S-NPP	75.13506	31.40126	13:54:00	D	5.60
434	TARN TARAN	KHADOOR SAHIB	S-NPP	75.13393	31.40353	13:54:00	D	2.70
435	TARN TARAN	KHADOOR SAHIB	AQUA	75.02300	31.40400	13:40:00	D	4.60
436	TARN TARAN	KHADOOR SAHIB	AQUA	75.08800	31.40500	13:40:00	D	12.00
437	TARN TARAN	KHADOOR SAHIB	S-NPP	75.05060	31.40942	13:54:00	D	6.20
438	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08507	31.41295	13:54:00	D	6.30

439	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08939	31.41339	13:54:00	D	9.70
440	TARN TARAN	KHADOOR SAHIB	S-NPP	75.10613	31.41930	13:54:00	D	3.20
441	TARN TARAN	KHADOOR SAHIB	S-NPP	74.96530	31.42975	13:54:00	D	3.90
442	TARN TARAN	KHADOOR SAHIB	S-NPP	74.77328	31.43003	13:54:00	D	4.10
443	TARN TARAN	KHADOOR SAHIB	S-NPP	75.14842	31.43203	13:54:00	D	3.50
444	TARN TARAN	KHADOOR SAHIB	S-NPP	75.09085	31.43449	13:54:00	D	3.50
445	TARN TARAN	KHADOOR SAHIB	AQUA	74.67300	31.43500	13:40:00	D	4.70
446	TARN TARAN	KHADOOR SAHIB	S-NPP	74.74725	31.43545	13:54:00	D	3.60
447	TARN TARAN	KHADOOR SAHIB	AQUA	75.12400	31.43800	13:40:00	D	8.20
448	TARN TARAN	KHADOOR SAHIB	AQUA	75.13400	31.43900	13:40:00	D	4.70
449	TARN TARAN	KHADOOR SAHIB	S-NPP	74.67078	31.44352	13:54:00	D	2.80
450	TARN TARAN	KHADOOR SAHIB	S-NPP	74.78819	31.44400	13:54:00	D	3.10
451	TARN TARAN	KHADOOR SAHIB	AQUA	74.97600	31.44400	13:40:00	D	11.90
452	TARN TARAN	KHADOOR SAHIB	S-NPP	74.80427	31.44986	13:54:00	D	3.20
453	TARN TARAN	KHADOOR SAHIB	S-NPP	75.16681	31.45916	13:54:00	D	4.90
454	TARN TARAN	KHADOOR SAHIB	S-NPP	75.09982	31.46477	13:54:00	D	2.00
455	TARN TARAN	KHADOOR SAHIB	AQUA	75.19700	31.46800	13:40:00	D	12.80
456	TARN TARAN	KHADOOR SAHIB	S-NPP	74.75627	31.46887	13:54:00	D	6.20
457	TARN TARAN	KHADOOR SAHIB	S-NPP	74.75509	31.46922	13:54:00	D	7.50
458	TARN TARAN	KHADOOR SAHIB	AQUA	75.20800	31.47000	13:40:00	D	5.10
459	TARN TARAN	KHADOOR SAHIB	S-NPP	74.77647	31.47509	13:54:00	D	2.80
460	TARN TARAN	KHADOOR SAHIB	S-NPP	74.86983	31.47646	13:54:00	D	3.90
461	TARN TARAN	KHADOOR SAHIB	S-NPP	74.86843	31.47750	13:54:00	D	3.00
462	TARN TARAN	KHADOOR SAHIB	AQUA	74.74000	31.48300	13:40:00	D	5.80
463	TARN TARAN	KHADOOR SAHIB	S-NPP	75.25632	31.48959	13:54:00	D	3.40
464	TARN TARAN	KHADOOR SAHIB	S-NPP	75.19348	31.49145	13:54:00	D	3.90
465	TARN TARAN	KHADOOR SAHIB	S-NPP	74.99674	31.49358	13:54:00	D	4.10
466	TARN TARAN	KHADOOR SAHIB	AQUA	74.69900	31.49400	13:40:00	D	6.90
467	TARN TARAN	KHADOOR SAHIB	S-NPP	75.26018	31.49422	13:54:00	D	3.00
468	TARN TARAN	KHADOOR SAHIB	S-NPP	74.99509	31.49542	13:54:00	D	3.50
469	TARN TARAN	KHADOOR SAHIB	S-NPP	75.02251	31.49620	13:54:00	D	4.30
470	TARN TARAN	KHADOOR SAHIB	S-NPP	75.02081	31.49821	13:54:00	D	3.20
471	TARN TARAN	KHADOOR SAHIB	S-NPP	74.72260	31.49823	13:54:00	D	2.60
472	TARN TARAN	KHADOOR SAHIB	S-NPP	74.70136	31.50009	13:54:00	D	5.50

473	TARN TARAN	KHADOOR SAHIB	S-NPP	74.70078	31.50413	13:54:00	D	5.50
474	TARN TARAN	KHADOOR SAHIB	S-NPP	75.15321	31.50519	13:54:00	D	1.70
475	TARN TARAN	KHADOOR SAHIB	S-NPP	75.10279	31.50704	13:54:00	D	4.00
476	TARN TARAN	KHADOOR SAHIB	S-NPP	75.09976	31.50821	13:54:00	D	5.70
477	TARN TARAN	KHADOOR SAHIB	S-NPP	74.63269	31.51321	13:54:00	D	6.70
478	TARN TARAN	KHADOOR SAHIB	S-NPP	74.80902	31.54452	13:54:00	D	3.30
479	TARN TARAN	KHADOOR SAHIB	S-NPP	74.81321	31.54497	13:54:00	D	4.40
480	TARN TARAN	PATTI	AQUA	74.80600	31.15000	13:40:00	D	5.40
481	TARN TARAN	PATTI	S-NPP	74.52783	31.17354	13:54:00	D	4.80
482	TARN TARAN	PATTI	S-NPP	74.87252	31.17361	13:54:00	D	2.80
483	TARN TARAN	PATTI	AQUA	74.81800	31.19800	13:40:00	D	4.80
484	TARN TARAN	PATTI	S-NPP	74.81799	31.20082	13:54:00	D	5.60
485	TARN TARAN	PATTI	AQUA	74.67900	31.20500	13:40:00	D	7.20
486	TARN TARAN	PATTI	S-NPP	74.92275	31.20782	13:54:00	D	3.30
487	TARN TARAN	PATTI	S-NPP	74.78674	31.21391	13:54:00	D	2.30
488	TARN TARAN	PATTI	AQUA	74.81400	31.21600	13:40:00	D	7.00
489	TARN TARAN	PATTI	AQUA	74.77400	31.22000	13:40:00	D	5.20
490	TARN TARAN	PATTI	S-NPP	74.77266	31.22470	13:54:00	D	5.30
491	TARN TARAN	PATTI	AQUA	74.63100	31.22600	13:40:00	D	7.10
492	TARN TARAN	PATTI	S-NPP	74.82167	31.23415	13:54:00	D	4.90
493	TARN TARAN	PATTI	AQUA	74.90900	31.25000	13:40:00	D	4.70
494	TARN TARAN	PATTI	AQUA	74.85300	31.26000	13:40:00	D	6.30
495	TARN TARAN	PATTI	S-NPP	74.56078	31.26749	13:54:00	D	3.90
496	TARN TARAN	PATTI	S-NPP	74.88395	31.27298	13:54:00	D	4.70
497	TARN TARAN	PATTI	S-NPP	74.88813	31.27341	13:54:00	D	4.70
498	TARN TARAN	PATTI	AQUA	74.79500	31.27800	13:40:00	D	8.80
499	TARN TARAN	PATTI	AQUA	74.69600	31.28200	13:40:00	D	7.10
500	TARN TARAN	PATTI	S-NPP	74.79356	31.28415	13:54:00	D	1.20
501	TARN TARAN	PATTI	S-NPP	74.69304	31.28578	13:54:00	D	2.00
502	TARN TARAN	PATTI	S-NPP	74.54582	31.28617	13:54:00	D	4.70
503	TARN TARAN	PATTI	S-NPP	74.65107	31.28944	13:54:00	D	6.50
504	TARN TARAN	PATTI	S-NPP	74.71293	31.29200	13:54:00	D	6.50
505	TARN TARAN	PATTI	AQUA	74.78000	31.29500	13:40:00	D	7.70
506	TARN TARAN	PATTI	S-NPP	74.78355	31.29543	13:54:00	D	6.60

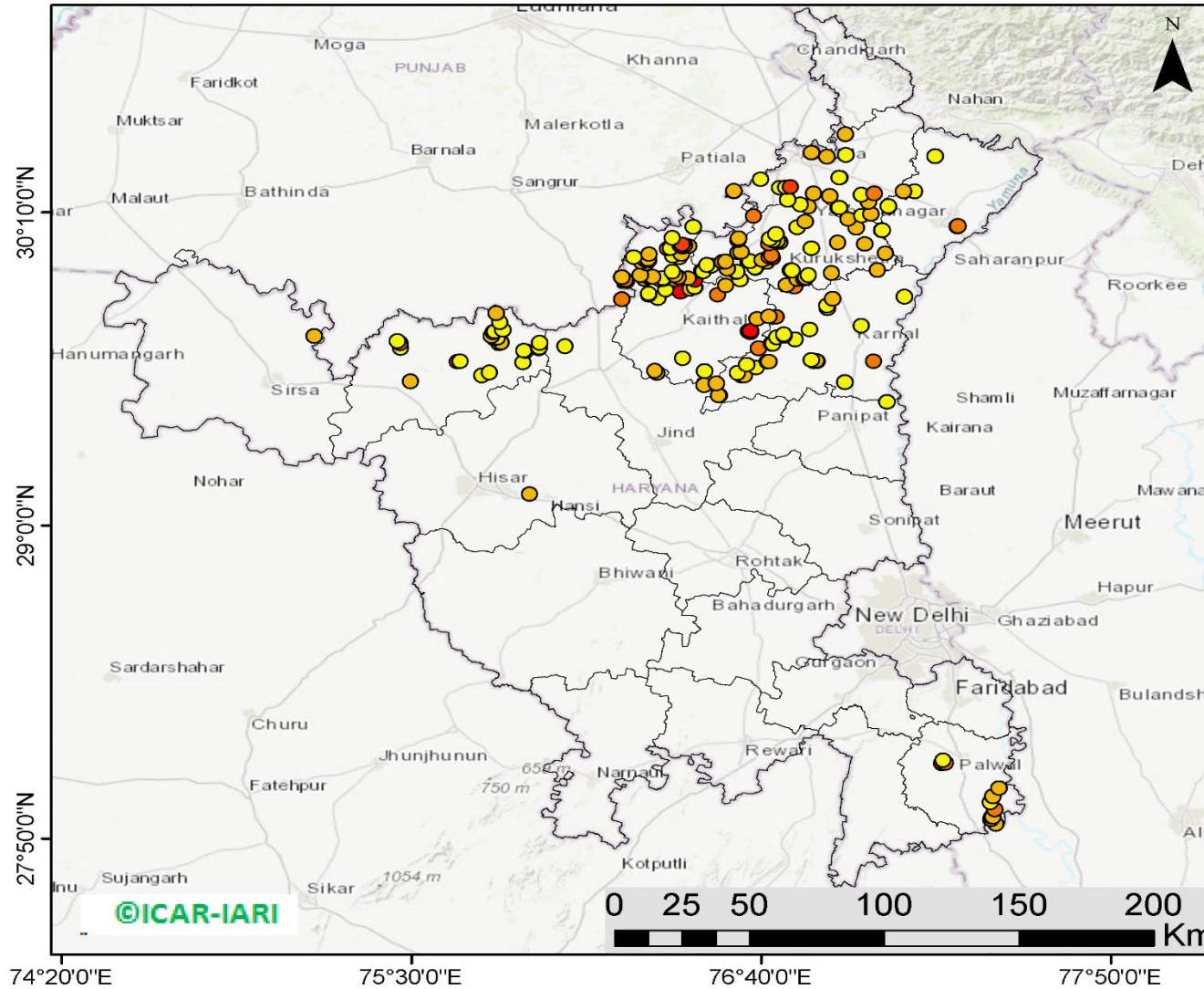
507	TARN TARAN	PATTI	S-NPP	74.57368	31.30547	13:54:00	D	6.00
508	TARN TARAN	PATTI	S-NPP	74.61511	31.31001	13:54:00	D	2.50
509	TARN TARAN	PATTI	S-NPP	74.76242	31.32605	13:54:00	D	2.50
510	TARN TARAN	PATTI	S-NPP	74.76655	31.32650	13:54:00	D	6.00
511	TARN TARAN	PATTI	S-NPP	74.76184	31.33010	13:54:00	D	2.50
512	TARN TARAN	PATTI	S-NPP	74.84602	31.33095	13:54:00	D	1.40
513	TARN TARAN	PATTI	AQUA	74.72300	31.33200	13:40:00	D	12.50
514	TARN TARAN	PATTI	AQUA	74.73400	31.33300	13:40:00	D	10.70
515	TARN TARAN	PATTI	S-NPP	74.87530	31.33408	13:54:00	D	3.00
516	TARN TARAN	PATTI	AQUA	74.87500	31.33600	13:40:00	D	17.50
517	TARN TARAN	PATTI	AQUA	74.88500	31.33800	13:40:00	D	12.90
518	TARN TARAN	PATTI	AQUA	74.68600	31.35400	13:40:00	D	9.60
519	TARN TARAN	PATTI	AQUA	74.76200	31.35600	13:40:00	D	8.60
520	TARN TARAN	PATTI	AQUA	74.77300	31.35800	13:40:00	D	10.90
521	TARN TARAN	PATTI	S-NPP	74.68291	31.35886	13:54:00	D	7.30
522	TARN TARAN	PATTI	S-NPP	74.76196	31.35888	13:54:00	D	3.20
523	TARN TARAN	PATTI	S-NPP	74.76236	31.35895	13:54:00	D	2.90
524	TARN TARAN	PATTI	S-NPP	74.68470	31.37542	13:54:00	D	3.70
525	TARN TARAN	PATTI	S-NPP	74.68411	31.37946	13:54:00	D	3.70
526	TARN TARAN	PATTI	S-NPP	74.67010	31.39024	13:54:00	D	3.00
527	TARN TARAN	PATTI	S-NPP	74.68181	31.39558	13:54:00	D	2.80
528	TARN TARAN	PATTI	AQUA	74.67900	31.40900	13:40:00	D	4.60
529	TARN TARAN	PATTI	S-NPP	74.61997	31.42160	13:54:00	D	4.70

District-wise cumulative number of residue burning events in Punjab (01 to 19-Oct 2019)



(b) Haryana

RICE RESIDUE BURNING IN HARYANA



220 burning events detected in Haryana on 19th October 2019

Fire Intensity (W/m²)

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



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

Details of residue burning events in Haryana on 19-Oct-2019

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	AMBALA	AMBALA	S-NPP	76.59054	30.07006	13:54:00	D	5.80
2	AMBALA	AMBALA	AQUA	76.64100	30.15300	13:40:00	D	12.20
3	AMBALA	AMBALA	S-NPP	76.75429	30.21433	13:54:00	D	4.70
4	AMBALA	AMBALA	S-NPP	76.89462	30.22754	13:54:00	D	5.80
5	AMBALA	AMBALA	AQUA	76.57500	30.24600	13:40:00	D	6.80
6	AMBALA	AMBALA	S-NPP	76.57527	30.24677	13:54:00	D	5.60
7	AMBALA	AMBALA	S-NPP	76.72822	30.25728	13:54:00	D	4.00
8	AMBALA	AMBALA	S-NPP	76.74879	30.25929	13:54:00	D	2.50
9	AMBALA	AMBALA	S-NPP	76.76424	30.26079	13:54:00	D	16.60
10	AMBALA	AMBALA	S-NPP	76.66570	30.28985	13:54:00	D	3.20
11	AMBALA	AMBALA	S-NPP	76.92904	30.29514	13:54:00	D	4.90
12	AMBALA	AMBALA	S-NPP	76.92765	30.29572	13:54:00	D	4.20
13	AMBALA	AMBALA	S-NPP	76.88598	30.37456	13:54:00	D	7.10
14	AMBALA	AMBALA	S-NPP	76.83655	30.38814	13:54:00	D	3.10
15	AMBALA	AMBALA	S-NPP	76.83333	30.38855	13:54:00	D	7.70
16	AMBALA	BARARA	AQUA	77.03300	30.16100	13:40:00	D	6.70
17	AMBALA	BARARA	AQUA	77.09200	30.18800	13:40:00	D	5.50
18	AMBALA	BARARA	S-NPP	77.09035	30.19070	13:54:00	D	4.30
19	AMBALA	BARARA	AQUA	77.02400	30.20600	13:40:00	D	7.40
20	AMBALA	BARARA	S-NPP	77.00094	30.23283	13:54:00	D	2.90
21	AMBALA	BARARA	S-NPP	77.04369	30.23678	13:54:00	D	10.50
22	AMBALA	NARAYANGARH	S-NPP	76.94951	30.38064	13:54:00	D	2.70
23	AMBALA	NARAYANGARH	S-NPP	76.94764	30.45881	13:54:00	D	5.50
24	FATEHABAD	FATEHABAD	AQUA	75.49700	29.53700	13:40:00	D	6.00
25	FATEHABAD	FATEHABAD	S-NPP	75.73538	29.55929	13:54:00	D	2.10
26	FATEHABAD	FATEHABAD	S-NPP	75.65343	29.61006	13:54:00	D	19.40
27	FATEHABAD	FATEHABAD	S-NPP	75.66211	29.61099	13:54:00	D	3.70
28	FATEHABAD	RATIA	S-NPP	75.46485	29.66281	13:54:00	D	2.70
29	FATEHABAD	RATIA	S-NPP	75.46259	29.67932	13:54:00	D	13.50
30	FATEHABAD	RATIA	S-NPP	75.45298	29.68667	13:54:00	D	3.40

31	FATEHABAD	TOHANA	S-NPP	75.76060	29.57038	13:54:00	D	2.20
32	FATEHABAD	TOHANA	S-NPP	75.87244	29.60759	13:54:00	D	2.30
33	FATEHABAD	TOHANA	AQUA	75.88000	29.64900	13:40:00	D	7.60
34	FATEHABAD	TOHANA	S-NPP	75.87579	29.65082	13:54:00	D	2.70
35	FATEHABAD	TOHANA	S-NPP	75.92459	29.66030	13:54:00	D	5.80
36	FATEHABAD	TOHANA	S-NPP	75.92597	29.66358	13:54:00	D	4.60
37	FATEHABAD	TOHANA	S-NPP	75.79233	29.68006	13:54:00	D	4.90
38	FATEHABAD	TOHANA	S-NPP	75.92823	29.68101	13:54:00	D	1.80
39	FATEHABAD	TOHANA	AQUA	75.80000	29.68300	13:40:00	D	5.60
40	FATEHABAD	TOHANA	AQUA	75.77600	29.69800	13:40:00	D	6.60
41	FATEHABAD	TOHANA	S-NPP	75.78509	29.70066	13:54:00	D	2.70
42	FATEHABAD	TOHANA	AQUA	75.76700	29.70700	13:40:00	D	6.90
43	FATEHABAD	TOHANA	S-NPP	75.77345	29.72078	13:54:00	D	3.20
44	FATEHABAD	TOHANA	S-NPP	75.77787	29.72125	13:54:00	D	3.20
45	FATEHABAD	TOHANA	S-NPP	75.80392	29.72827	13:54:00	D	3.50
46	FATEHABAD	TOHANA	S-NPP	75.79556	29.75731	13:54:00	D	3.30
47	FATEHABAD	TOHANA	AQUA	75.78200	29.79200	13:40:00	D	8.60
48	HISAR	HISAR	AQUA	75.89400	29.11600	13:40:00	D	6.30
49	JIND	JIND	AQUA	76.47600	29.52300	13:40:00	D	6.40
50	JIND	NARWANA	S-NPP	76.31874	29.56857	13:54:00	D	6.80
51	JIND	NARWANA	S-NPP	76.31288	29.57677	13:54:00	D	6.20
52	JIND	NARWANA	AQUA	76.01200	29.66800	13:40:00	D	4.30
53	JIND	NARWANA	AQUA	76.20200	29.84300	13:40:00	D	10.30
54	KAITHAL	GUHLA	AQUA	76.21600	29.90900	13:40:00	D	5.90
55	KAITHAL	GUHLA	S-NPP	76.21304	29.91265	13:54:00	D	14.90
56	KAITHAL	GUHLA	S-NPP	76.20934	29.91339	13:54:00	D	6.80
57	KAITHAL	GUHLA	S-NPP	76.21407	29.91385	13:54:00	D	11.10
58	KAITHAL	GUHLA	AQUA	76.33000	29.91600	13:40:00	D	5.10
59	KAITHAL	GUHLA	S-NPP	76.37710	29.91632	13:54:00	D	11.70
60	KAITHAL	GUHLA	AQUA	76.34000	29.91800	13:40:00	D	7.80
61	KAITHAL	GUHLA	AQUA	76.42300	29.92100	13:40:00	D	8.30
62	KAITHAL	GUHLA	S-NPP	76.33746	29.92111	13:54:00	D	5.30
63	KAITHAL	GUHLA	S-NPP	76.33879	29.92151	13:54:00	D	4.00

64	KAITHAL	GUHLA	AQUA	76.39100	29.92500	13:40:00	D	5.20
65	KAITHAL	GUHLA	AQUA	76.20200	29.92600	13:40:00	D	5.20
66	KAITHAL	GUHLA	S-NPP	76.29444	29.92606	13:54:00	D	3.10
67	KAITHAL	GUHLA	AQUA	76.37900	29.93300	13:40:00	D	5.40
68	KAITHAL	GUHLA	AQUA	76.26300	29.93400	13:40:00	D	7.20
69	KAITHAL	GUHLA	S-NPP	76.28294	29.97785	13:54:00	D	6.90
70	KAITHAL	GUHLA	AQUA	76.26800	29.98200	13:40:00	D	8.10
71	KAITHAL	GUHLA	S-NPP	76.28184	29.98656	13:54:00	D	5.40
72	KAITHAL	GUHLA	S-NPP	76.29142	29.98753	13:54:00	D	3.30
73	KAITHAL	GUHLA	S-NPP	76.28129	29.99092	13:54:00	D	7.30
74	KAITHAL	GUHLA	S-NPP	76.29086	29.99189	13:54:00	D	5.90
75	KAITHAL	GUHLA	S-NPP	76.39274	29.99770	13:54:00	D	4.80
76	KAITHAL	GUHLA	S-NPP	76.24147	30.00009	13:54:00	D	4.00
77	KAITHAL	GUHLA	S-NPP	76.37222	30.00451	13:54:00	D	4.80
78	KAITHAL	GUHLA	S-NPP	76.29343	30.00981	13:54:00	D	9.60
79	KAITHAL	GUHLA	AQUA	76.40000	30.01000	13:40:00	D	5.30
80	KAITHAL	GUHLA	AQUA	76.35400	30.03100	13:40:00	D	8.80
81	KAITHAL	GUHLA	AQUA	76.36400	30.03200	13:40:00	D	4.70
82	KAITHAL	GUHLA	AQUA	76.40500	30.03800	13:40:00	D	9.00
83	KAITHAL	GUHLA	AQUA	76.42500	30.04100	13:40:00	D	5.60
84	KAITHAL	GUHLA	S-NPP	76.39693	30.04255	13:54:00	D	4.30
85	KAITHAL	GUHLA	S-NPP	76.39890	30.04284	13:54:00	D	7.50
86	KAITHAL	GUHLA	S-NPP	76.40866	30.04377	13:54:00	D	6.60
87	KAITHAL	GUHLA	S-NPP	76.41154	30.04405	13:54:00	D	5.70
88	KAITHAL	GUHLA	AQUA	76.40300	30.04700	13:40:00	D	15.70
89	KAITHAL	GUHLA	S-NPP	76.37067	30.07119	13:54:00	D	3.50
90	KAITHAL	GUHLA	S-NPP	76.43951	30.11358	13:54:00	D	2.20
91	KAITHAL	KAITHAL	S-NPP	76.47778	29.57583	13:54:00	D	2.80
92	KAITHAL	KAITHAL	S-NPP	76.40539	29.62201	13:54:00	D	3.40
93	KAITHAL	KAITHAL	S-NPP	76.70123	29.67750	13:54:00	D	3.30
94	KAITHAL	KAITHAL	S-NPP	76.70624	29.67799	13:54:00	D	3.30
95	KAITHAL	KAITHAL	S-NPP	76.63034	29.71999	13:54:00	D	8.50
96	KAITHAL	KAITHAL	S-NPP	76.62482	29.72392	13:54:00	D	27.80

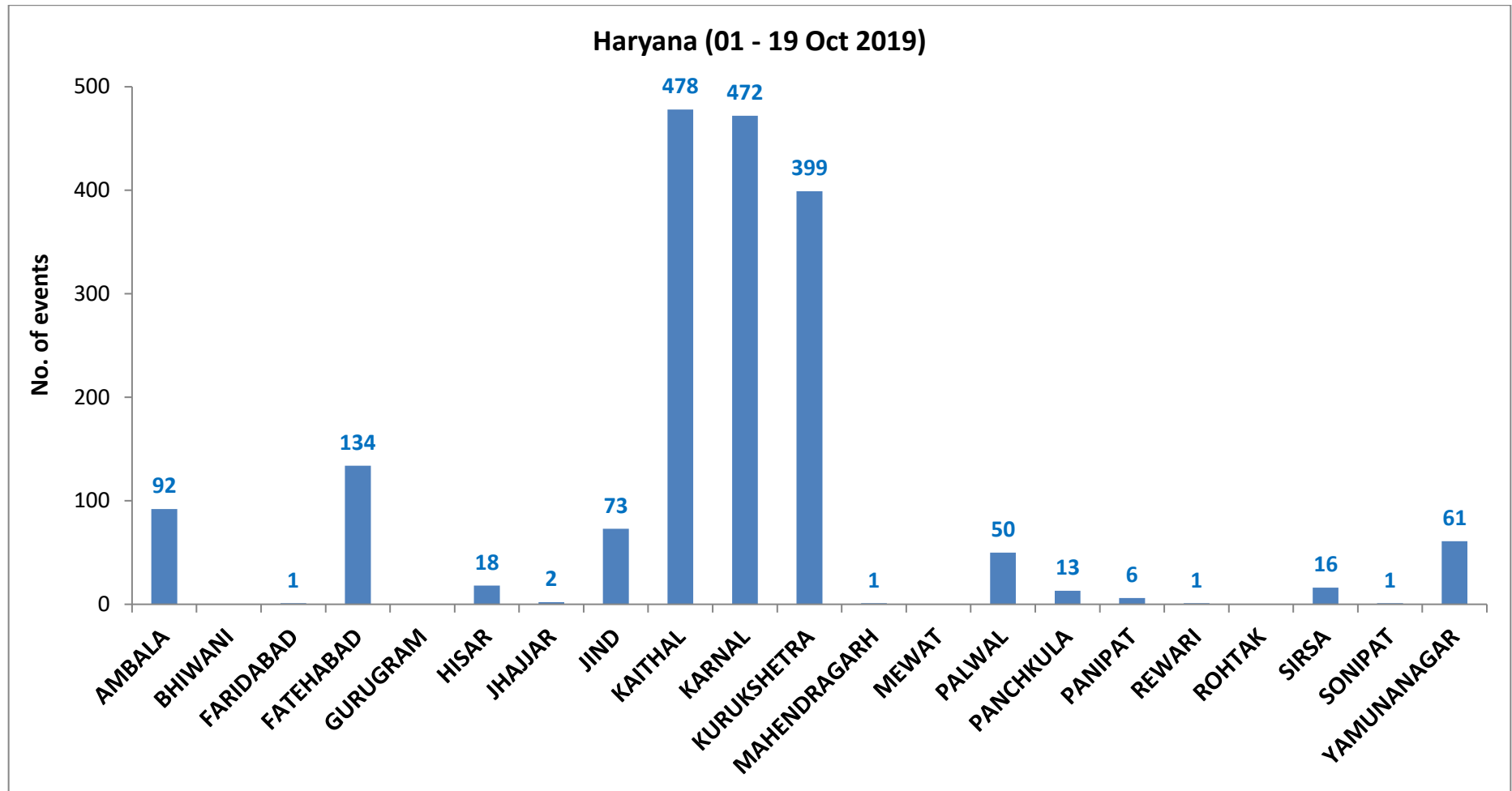
97	KAITHAL	KAITHAL	S-NPP	76.62978	29.72442	13:54:00	D	27.80
98	KAITHAL	KAITHAL	S-NPP	76.65210	29.76988	13:54:00	D	8.90
99	KAITHAL	KAITHAL	S-NPP	76.69158	29.77818	13:54:00	D	7.70
100	KAITHAL	KAITHAL	S-NPP	76.32234	29.84890	13:54:00	D	3.70
101	KAITHAL	KAITHAL	S-NPP	76.29201	29.85912	13:54:00	D	3.80
102	KAITHAL	KAITHAL	S-NPP	76.52251	29.85957	13:54:00	D	12.50
103	KAITHAL	KAITHAL	S-NPP	76.29144	29.86347	13:54:00	D	3.80
104	KAITHAL	KAITHAL	S-NPP	76.39770	29.86962	13:54:00	D	20.40
105	KAITHAL	KAITHAL	S-NPP	76.34779	29.87794	13:54:00	D	4.30
106	KAITHAL	KAITHAL	S-NPP	76.43055	29.88175	13:54:00	D	6.30
107	KAITHAL	KAITHAL	AQUA	76.44600	29.88700	13:40:00	D	8.80
108	KAITHAL	KAITHAL	S-NPP	76.44458	29.88759	13:54:00	D	2.10
109	KAITHAL	KAITHAL	S-NPP	76.54823	29.89337	13:54:00	D	8.70
110	KAITHAL	KAITHAL	AQUA	76.44600	29.91500	13:40:00	D	41.20
111	KAITHAL	KAITHAL	AQUA	76.27700	29.91800	13:40:00	D	6.50
112	KAITHAL	KAITHAL	S-NPP	76.29323	29.92538	13:54:00	D	2.20
113	KAITHAL	KAITHAL	S-NPP	76.30279	29.92637	13:54:00	D	4.30
114	KAITHAL	KAITHAL	S-NPP	76.30402	29.92699	13:54:00	D	7.00
115	KAITHAL	KAITHAL	S-NPP	76.36977	29.94664	13:54:00	D	2.30
116	KAITHAL	KAITHAL	S-NPP	76.46831	29.94727	13:54:00	D	4.50
117	KAITHAL	KAITHAL	S-NPP	76.47321	29.94773	13:54:00	D	5.00
118	KARNAL	ASSANDH	S-NPP	76.52737	29.48363	13:54:00	D	4.40
119	KARNAL	ASSANDH	AQUA	76.52500	29.48400	13:40:00	D	5.60
120	KARNAL	ASSANDH	AQUA	76.51700	29.52900	13:40:00	D	6.40
121	KARNAL	ASSANDH	AQUA	76.60000	29.55900	13:40:00	D	19.80
122	KARNAL	ASSANDH	AQUA	76.61000	29.56000	13:40:00	D	9.70
123	KARNAL	ASSANDH	S-NPP	76.58723	29.56889	13:54:00	D	2.50
124	KARNAL	ASSANDH	S-NPP	76.64970	29.58849	13:54:00	D	2.80
125	KARNAL	ASSANDH	S-NPP	76.61838	29.59883	13:54:00	D	3.00
126	KARNAL	ASSANDH	S-NPP	76.68722	29.61019	13:54:00	D	8.70
127	KARNAL	ASSANDH	S-NPP	76.69221	29.61068	13:54:00	D	8.70
128	KARNAL	ASSANDH	AQUA	76.65800	29.66000	13:40:00	D	13.40
129	KARNAL	GHARAUNDA	S-NPP	77.08655	29.46070	13:54:00	D	3.60

130	KARNAL	GHARAUNDA	S-NPP	76.94611	29.53437	13:54:00	D	3.10
131	KARNAL	GHARAUNDA	AQUA	77.04200	29.61100	13:40:00	D	13.30
132	KARNAL	INDRI	S-NPP	77.14413	29.85335	13:54:00	D	3.90
133	KARNAL	KARNAL	AQUA	76.84200	29.61100	13:40:00	D	8.30
134	KARNAL	KARNAL	AQUA	76.85200	29.61200	13:40:00	D	8.80
135	KARNAL	KARNAL	S-NPP	76.84507	29.61219	13:54:00	D	5.20
136	KARNAL	KARNAL	S-NPP	76.85017	29.61269	13:54:00	D	7.80
137	KARNAL	KARNAL	S-NPP	76.83434	29.61568	13:54:00	D	3.00
138	KARNAL	KARNAL	S-NPP	76.78073	29.69422	13:54:00	D	3.70
139	KARNAL	KARNAL	S-NPP	76.71854	29.70173	13:54:00	D	3.70
140	KARNAL	KARNAL	AQUA	76.74400	29.70800	13:40:00	D	7.80
141	KARNAL	KARNAL	S-NPP	76.74261	29.71312	13:54:00	D	4.20
142	KARNAL	KARNAL	S-NPP	76.82771	29.73055	13:54:00	D	3.70
143	KARNAL	KARNAL	AQUA	77.00100	29.74400	13:40:00	D	5.00
144	KARNAL	KARNAL	AQUA	76.70400	29.77600	13:40:00	D	23.80
145	KARNAL	KARNAL	AQUA	76.71500	29.77700	13:40:00	D	12.10
146	KARNAL	NILOKHERI	AQUA	76.88800	29.81000	13:40:00	D	5.00
147	KARNAL	NILOKHERI	AQUA	76.88600	29.81900	13:40:00	D	4.20
148	KARNAL	NILOKHERI	S-NPP	76.90538	29.84425	13:54:00	D	7.90
149	KURUKSHETRA	PEHOWA	S-NPP	76.59565	29.91598	13:54:00	D	4.40
150	KURUKSHETRA	PEHOWA	S-NPP	76.58367	29.94481	13:54:00	D	4.60
151	KURUKSHETRA	PEHOWA	S-NPP	76.58679	29.94653	13:54:00	D	4.50
152	KURUKSHETRA	PEHOWA	AQUA	76.55300	29.95700	13:40:00	D	8.50
153	KURUKSHETRA	PEHOWA	S-NPP	76.64766	29.95983	13:54:00	D	3.30
154	KURUKSHETRA	PEHOWA	AQUA	76.64700	29.96100	13:40:00	D	7.00
155	KURUKSHETRA	PEHOWA	S-NPP	76.64568	29.96148	13:54:00	D	3.00
156	KURUKSHETRA	PEHOWA	S-NPP	76.50050	29.96821	13:54:00	D	3.50
157	KURUKSHETRA	PEHOWA	S-NPP	76.48515	29.97119	13:54:00	D	2.00
158	KURUKSHETRA	PEHOWA	S-NPP	76.68580	29.98148	13:54:00	D	5.70
159	KURUKSHETRA	PEHOWA	AQUA	76.53800	29.98200	13:40:00	D	11.80
160	KURUKSHETRA	PEHOWA	AQUA	76.54800	29.98400	13:40:00	D	5.80
161	KURUKSHETRA	PEHOWA	AQUA	76.62200	29.98500	13:40:00	D	7.60
162	KURUKSHETRA	PEHOWA	S-NPP	76.62926	29.98510	13:54:00	D	3.80

163	KURUKSHETRA	PEHOWA	S-NPP	76.66952	29.98896	13:54:00	D	5.50
164	KURUKSHETRA	PEHOWA	AQUA	76.70400	29.99600	13:40:00	D	16.70
165	KURUKSHETRA	PEHOWA	S-NPP	76.69370	30.00031	13:54:00	D	2.90
166	KURUKSHETRA	PEHOWA	AQUA	76.70200	30.00500	13:40:00	D	13.30
167	KURUKSHETRA	PEHOWA	S-NPP	76.58980	30.01725	13:54:00	D	4.90
168	KURUKSHETRA	PEHOWA	S-NPP	76.59979	30.01823	13:54:00	D	6.30
169	KURUKSHETRA	PEHOWA	AQUA	76.58900	30.06400	13:40:00	D	5.80
170	KURUKSHETRA	SHAHABAD	AQUA	76.81400	30.13200	13:40:00	D	6.10
171	KURUKSHETRA	SHAHABAD	S-NPP	76.95624	30.14102	13:54:00	D	7.10
172	KURUKSHETRA	SHAHABAD	S-NPP	76.92440	30.18394	13:54:00	D	1.60
173	KURUKSHETRA	SHAHABAD	S-NPP	76.92646	30.18458	13:54:00	D	3.00
174	KURUKSHETRA	SHAHABAD	AQUA	76.82500	30.18800	13:40:00	D	8.80
175	KURUKSHETRA	SHAHABAD	S-NPP	76.79837	30.19570	13:54:00	D	4.40
176	KURUKSHETRA	SHAHABAD	AQUA	76.84100	30.23700	13:40:00	D	8.80
177	KURUKSHETRA	THANESAR	S-NPP	76.77757	29.88849	13:54:00	D	12.20
178	KURUKSHETRA	THANESAR	S-NPP	76.75098	29.89502	13:54:00	D	6.00
179	KURUKSHETRA	THANESAR	AQUA	76.78700	29.91700	13:40:00	D	5.30
180	KURUKSHETRA	THANESAR	AQUA	76.80800	29.91900	13:40:00	D	13.10
181	KURUKSHETRA	THANESAR	S-NPP	76.81465	29.92384	13:54:00	D	8.30
182	KURUKSHETRA	THANESAR	S-NPP	76.82381	29.93383	13:54:00	D	2.30
183	KURUKSHETRA	THANESAR	S-NPP	76.90134	29.94133	13:54:00	D	5.60
184	KURUKSHETRA	THANESAR	S-NPP	76.76478	29.95077	13:54:00	D	4.30
185	KURUKSHETRA	THANESAR	S-NPP	76.76988	29.95128	13:54:00	D	4.30
186	KURUKSHETRA	THANESAR	S-NPP	77.05423	29.95137	13:54:00	D	8.60
187	KURUKSHETRA	THANESAR	S-NPP	77.08144	30.01384	13:54:00	D	6.00
188	KURUKSHETRA	THANESAR	AQUA	76.83400	30.03300	13:40:00	D	4.20
189	KURUKSHETRA	THANESAR	AQUA	77.01200	30.04800	13:40:00	D	6.10
190	KURUKSHETRA	THANESAR	S-NPP	76.69270	30.04996	13:54:00	D	12.90
191	KURUKSHETRA	THANESAR	S-NPP	76.92146	30.05408	13:54:00	D	9.80
192	KURUKSHETRA	THANESAR	AQUA	76.72800	30.05600	13:40:00	D	7.80
193	KURUKSHETRA	THANESAR	S-NPP	76.71967	30.05960	13:54:00	D	6.00
194	KURUKSHETRA	THANESAR	S-NPP	76.72208	30.06193	13:54:00	D	7.00
195	KURUKSHETRA	THANESAR	AQUA	76.70600	30.06200	13:40:00	D	4.80

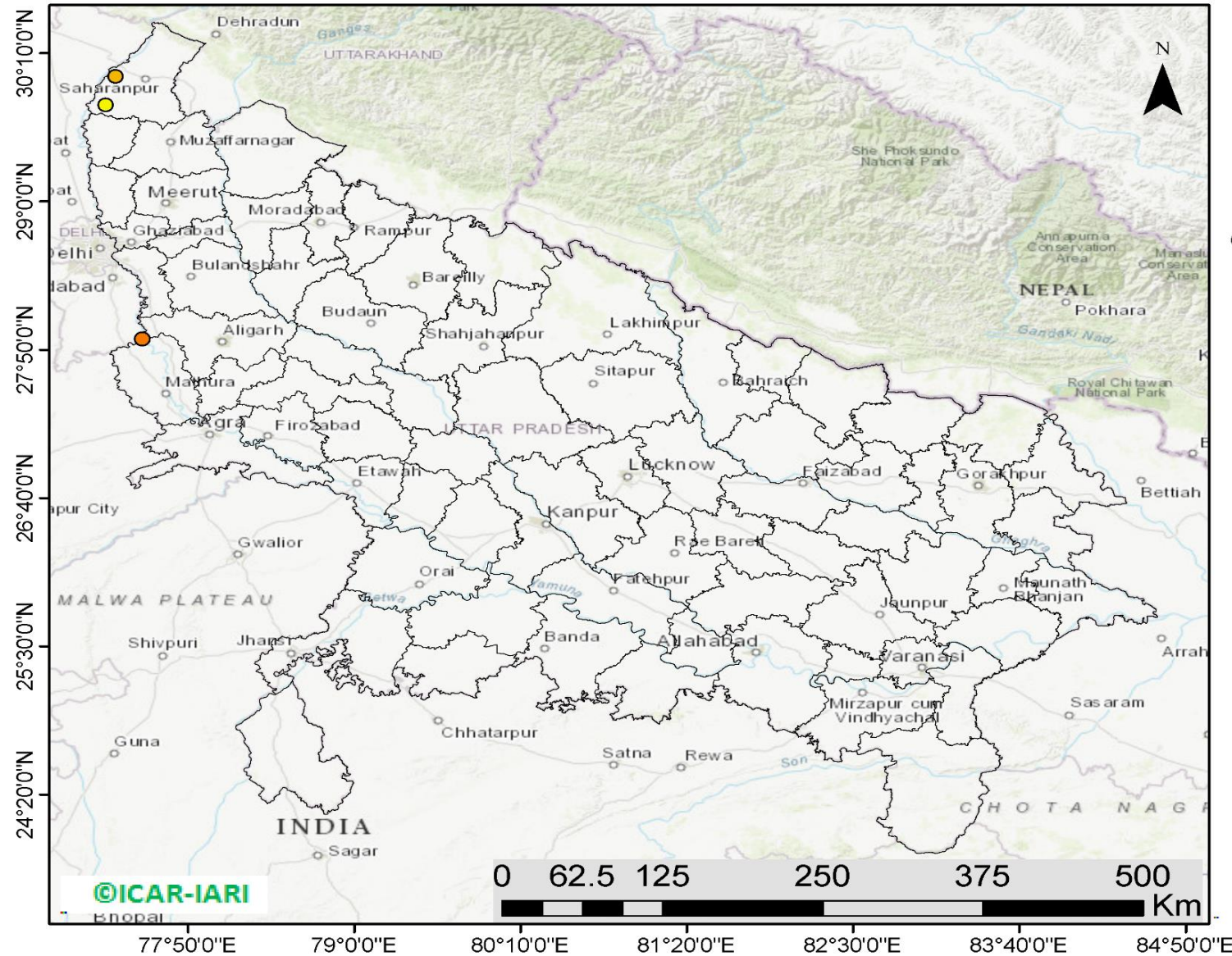
196	KURUKSHETRA	THANESAR	S-NPP	76.69557	30.06834	13:54:00	D	2.50
197	KURUKSHETRA	THANESAR	S-NPP	76.71632	30.08646	13:54:00	D	3.10
198	KURUKSHETRA	THANESAR	AQUA	76.98400	30.10900	13:40:00	D	7.30
199	KURUKSHETRA	THANESAR	S-NPP	76.78584	30.11119	13:54:00	D	2.00
200	KURUKSHETRA	THANESAR	S-NPP	77.00275	30.15462	13:54:00	D	1.90
201	PALWAL	HODAL	S-NPP	77.45023	27.88746	13:54:00	D	7.60
202	PALWAL	HODAL	S-NPP	77.43249	27.90412	13:54:00	D	13.70
203	PALWAL	HODAL	S-NPP	77.43438	27.90447	13:54:00	D	9.40
204	PALWAL	HODAL	S-NPP	77.43658	27.91376	13:54:00	D	6.50
205	PALWAL	HODAL	S-NPP	77.43848	27.91408	13:54:00	D	7.80
206	PALWAL	HODAL	S-NPP	77.44559	27.94245	13:54:00	D	12.60
207	PALWAL	HODAL	S-NPP	77.43189	27.96880	13:54:00	D	4.20
208	PALWAL	HODAL	AQUA	77.43900	27.99100	13:40:00	D	7.20
209	PALWAL	PALWAL	AQUA	77.45900	28.02100	13:40:00	D	8.40
210	PALWAL	PALWAL	AQUA	77.26900	28.11500	13:40:00	D	29.00
211	PALWAL	PALWAL	AQUA	77.28000	28.11600	13:40:00	D	10.40
212	PALWAL	PALWAL	S-NPP	77.27306	28.12491	13:54:00	D	4.90
213	SIRSA	SIRSA	S-NPP	75.17595	29.70596	13:54:00	D	7.10
214	YAMUNANAGAR	JAGADHRI	S-NPP	77.06860	30.10065	13:54:00	D	3.80
215	YAMUNANAGAR	JAGADHRI	S-NPP	77.07101	30.10079	13:54:00	D	3.30
216	YAMUNANAGAR	JAGADHRI	S-NPP	77.32055	30.11375	13:54:00	D	9.80
217	YAMUNANAGAR	JAGADHRI	S-NPP	77.32254	30.11558	13:54:00	D	11.60
218	YAMUNANAGAR	JAGADHRI	S-NPP	77.17954	30.24456	13:54:00	D	2.20
219	YAMUNANAGAR	JAGADHRI	S-NPP	77.14082	30.24569	13:54:00	D	5.40
220	YAMUNANAGAR	JAGADHRI	S-NPP	77.24618	30.37574	13:54:00	D	5.00

District-wise cumulative number of residue burning events in Haryana (01 to 19-Oct 2019)



(c) UP

RICE RESIDUE BURNING IN UTTAR PRADESH



03 burning events
detected in Uttar Pradesh on
19th October 2019

Fire Intensity (W/m²)

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

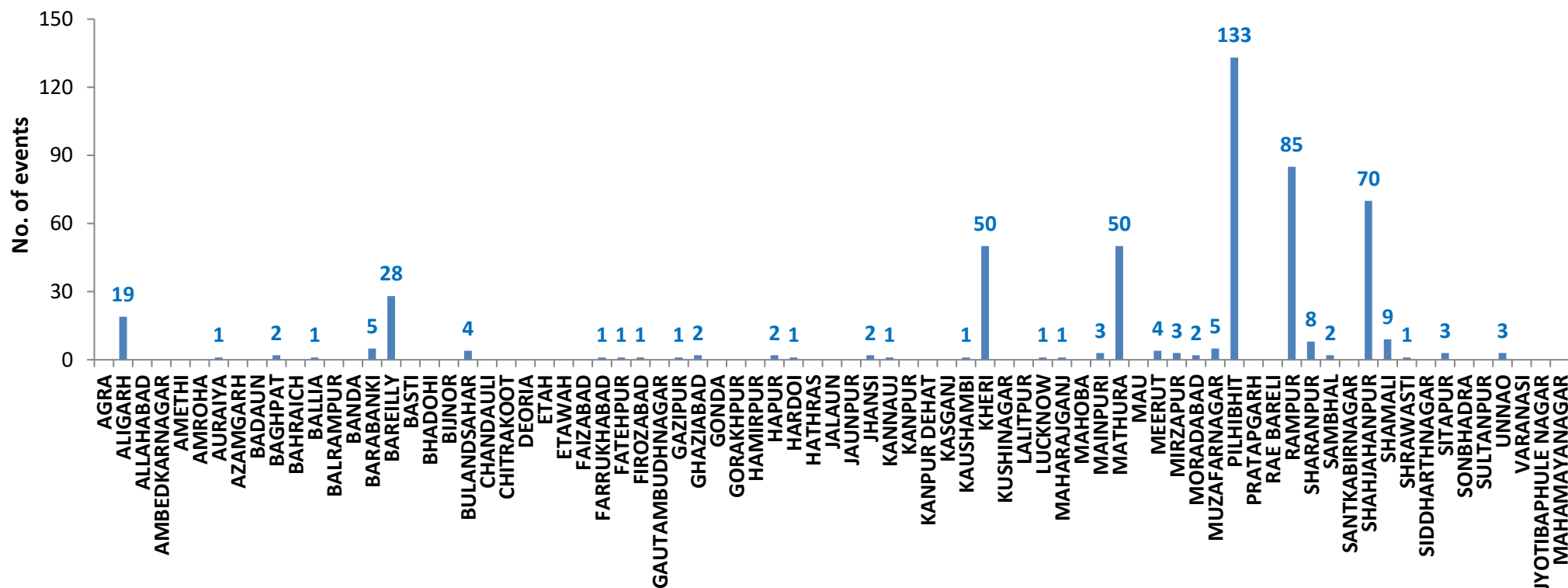
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

Details of residue burning events in Uttar Pradesh on 19-Oct-2019

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	MATHURA	CHHATA	AQUA	77.51100	27.91700	13:40:00	D	13.20
2	SHARANPUR	NAKUR	S-NPP	77.25533	29.75788	13:54:00	D	3.60
3	SHARANPUR	NAKUR	S-NPP	77.32436	29.98146	13:54:00	D	8.80

District-wise cumulative number of residue burning events in Uttar Pradesh (01 to 19-Oct 2019)

Uttar Pradesh (01 - 19 Oct 2019)



State-wise, date-wise and district-wise number of residue burning events detected in 2016, 2017, 2018 and 2019
(Period: 01-Oct to 19-Oct)

Date	Punjab				Haryana				UP				Total			
	2019	2018	2017	2016	2019	2018	2017	2016	2019	2018	2017	2016	2019	2018	2017	2016
01-Oct	3	16	54	109	1	9	13	46	1	11	2	23	5	36	69	178
02-Oct	20	9	50	51	2	23	27	16	0	21	8	20	23	53	85	87
03-Oct	37	4	62	66	16	9	40	16	3	12	17	16	56	25	119	98
04-Oct	3	32	103	37	30	16	60	7	4	5	22	15	37	53	185	59
05-Oct	16	56	106	95	37	30	68	15	11	10	20	14	64	96	194	124
06-Oct	0	87	138	152	22	63	75	105	8	13	39	6	30	163	252	263
07-Oct	27	162	105	171	16	180	97	126	4	69	33	24	47	411	235	321
08-Oct	59	39	215	166	69	40	218	94	18	54	76	14	146	133	509	274
09-Oct	93	75	163	270	70	47	148	121	17	32	88	22	180	154	399	413
10-Oct	172	23	164	597	157	37	151	242	53	21	126	74	382	81	441	913
11-Oct	78	30	177	652	126	78	87	336	38	24	74	128	242	131	338	1116
12-Oct	99	67	342	694	154	133	123	338	42	22	51	164	295	222	516	1196
13-Oct	108	62	470	467	159	147	207	284	33	61	69	102	300	270	746	853
14-Oct	141	112	582	812	133	153	333	328	39	57	137	60	313	322	1052	1200
15-Oct	262	90	943	1215	203	110	458	248	63	35	237	76	528	235	1638	1539
16-Oct	168	174	465	1478	148	138	186	385	77	20	71	125	393	332	722	1988
17-Oct	250	272	807	2173	152	268	244	399	53	94	69	261	455	634	1120	2833
18-Oct	100	263	970	1065	103	255	306	270	39	163	108	204	242	681	1384	1539
19-Oct	529	254	1591	1762	220	208	541	276	3	108	128	132	752	570	2260	2170
Total	2165	1827	7507	12032	1818	1944	3382	3652	506	832	1375	1480	4489	4603	12264	17164

(a) Punjab

Districts	01-19 Oct			
	2016	2017	2018	2019
AMRITSAR	929	638	511	443
BARNALA	33	26	12	9
BATHINDA	743	560	53	26
FARIDKOT	938	945	71	87
FATEHGARH SAHIB	664	298	38	38
FAZILKA	0	0	0	68
FIROZPUR	1324	986	137	143
GURDASPUR	556	248	78	137
HOSHIARPUR	110	48	4	14
JALANDHAR	764	313	22	93
KAPURTHALA	675	165	8	71
LUDHIANA	568	471	47	27
MANSA	146	154	43	58
MOGA	172	115	11	22
MUKTSAR	1028	402	50	38
NAWASHAHR (SBS Nagar)	230	115	21	32
PATHANKOT	0	0	0	0
PATIALA	988	801	246	284
RUPNAGAR	146	28	1	3
SANGRUR	233	223	91	56
SAS NAGAR	71	57	45	30
TARN TARAN	1714	914	338	486
Total	12032	7507	1827	2165

(b) Haryana

Districts	01-19 Oct			
	2016	2017	2018	2019
AMBALA	240	209	60	92
BHIWANI	1	2	3	0
FARIDABAD	29	71	64	1
FATEHABAD	205	239	101	134
GURUGRAM	0	0	0	0
HISAR	29	27	13	18
JHAJJAR	4	1	5	2
JIND	113	147	77	73
KAITHAL	963	733	563	478
KARNAL	1090	962	530	472
KURUKSHETRA	750	735	411	399
MAHENDRAGARH	0	0	0	1
MEWAT	0	0	0	0
PALWAL	0	0	0	50
PANCHKULA	0	0	3	13
PANIPAT	28	37	33	6
REWARI	0	0	0	1
ROHTAK	3	3	0	0
SIRSA	108	73	24	16
SONIPAT	8	17	11	1
YAMUNANAGAR	81	126	46	61
Total	3652	3382	1944	1818

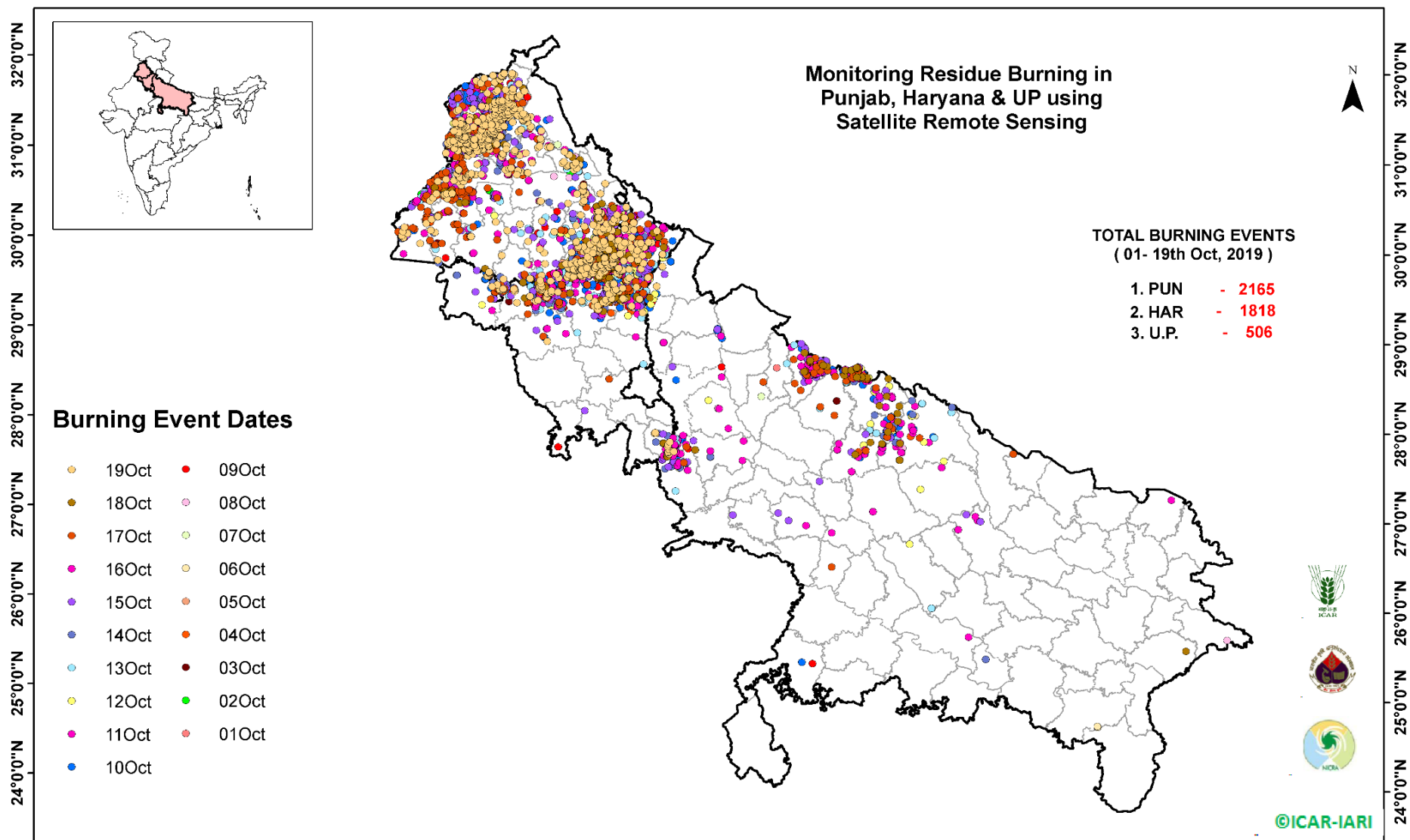
(c) Uttar Pradesh

Districts	01-19 Oct			
	2016	2017	2018	2019
AGRA	0	0	0	0
ALIGARH	8	14	16	19
ALLAHABAD	0	0	3	0
AMBEDKARNAGAR	0	1	0	0
AMETHI	0	0	0	0
AMROHA	0	0	0	0
AURAIYA	47	50	17	1
AZAMGARH	0	0	0	0
BADAUN	0	1	0	0
BAGHPAT	0	0	0	2
BAHRAICH	0	2	6	0
BALLIA	0	0	0	1
BALRAMPUR	0	0	1	0
BANDA	1	0	1	0
BARABANKI	45	27	62	5
BAREILLY	78	53	17	28
BASTI	0	0	0	0
BHADOHI	0	0	0	0
BIJNOR	3	1	1	0
BULANDSAHAR	3	6	7	4
CHANDAULI	0	0	0	0
CHITRAKOOT	0	0	0	0
DEORIA	0	0	0	0
ETAH	0	9	11	0
ETAWAH	3	10	2	0
FAIZABAD	1	1	0	0
FARRUKHABAD	0	0	0	1
FATEHPUR	5	5	10	1
FIROZABAD	3	1	1	1

GAUTAMBUDHNAGAR	3	4	4	0
GAZIPUR	0	0	0	1
GHAZIABAD	8	5	3	2
GONDA	0	0	0	0
GORAKHPUR	0	2	4	0
HAMIRPUR	0	0	1	0
HAPUR	0	0	0	2
HARDOI	16	13	7	1
HATHRAS	0	0	0	0
JALAUN	0	0	0	0
JAUNPUR	1	0	3	0
JHANSI	0	0	2	2
KANNAUJ	0	1	2	1
KANPUR	1	3	0	0
KANPUR DEHAT	0	1	0	0
KASGANJ	0	0	0	0
KAUSHAMBI	0	4	9	1
KHERI	128	105	61	50
KUSHINAGAR	0	1	0	0
LALITPUR	0	0	0	0
LUCKNOW	6	5	0	1
MAHARAJGANJ	3	21	15	1
MAHOBA	0	0	0	0
MAINPURI	0	6	4	3
MATHURA	36	75	197	50
MAU	1	0	2	0
MEERUT	14	9	3	4
MIRZAPUR	0	2	4	3
MORADABAD	10	10	5	2
MUZAFARNAGAR	43	44	18	5
PILHIBHIT	301	252	129	133
PRATAPGARH	0	0	2	0

RAE BARELI	0	0	0	0
RAMPUR	279	211	67	85
SHARANPUR	22	28	13	8
SAMBHAL	0	0	0	2
SANTKABIRNAGAR	0	0	0	0
SHAHJAHANPUR	378	374	98	70
SHAMALI	0	0	0	9
SHRAWASTI	0	3	2	1
SIDDHARTHANAGAR	1	1	1	0
SITAPUR	24	10	9	3
SONBHADRA	4	1	7	0
SULTANPUR	0	0	0	0
UNNAO	3	3	3	3
VARANASI	0	0	0	0
JYOTIBAPHULE NAGAR	1	0	1	0
MAHAMAYANAGAR	0	0	1	0
Total	1480	1375	832	506

Map of Cumulative Burning Events (01 – 19 Oct 2019)



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

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 / 1000	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.)	ddgengg@icar.org.in
	Dr S. Bhasker	ADG (NRM)	adgagroandaf@gmail.com
	Dr K.K. Singh	ADG (AG. ENGG)	kanchansingh044@gmail.com
ICAR - IARI	Dr V.K. Sehgal	Professor & Nodal Scientist	iaricreams@gmail.com
	Dr Rajkumar Dhakar	Scientist	raidhakar.iari@gmail.com
	Mr Rakeswer Verma	Chief Technical Officer	rakeshwar.verma@icar.gov.in
	Mr Mohd Jahangir	Lab Assistant (KRISHI)	mjahangir198@gmail.com
ICAR - ATARI	Dr Rajbir Singh	Director ATARI (Zone-I) Ludhiana	rajbirsingh.zpd@gmail.com
	Dr S.K. Singh	Director ATARI (Zone-II) Jodhpur	sushilsinghiipr@yahoo.co.in
	Dr Atar Singh	Director ATARI (Zone-III) Kanpur	zpdicarkanpur@gmail.com
ICAR - IASRI	Dr Rajender Parsad	Principal Scientist	rajender.parsad@icar.gov.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)
