

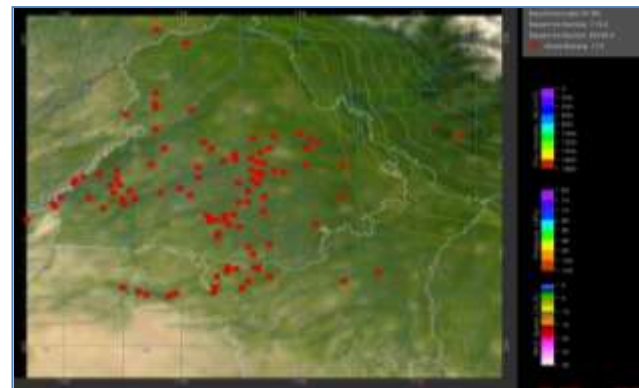


MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2020

**Bulletin
No. 3**

**Events Date:
03-Oct-2020**

**Issued on:
04-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**

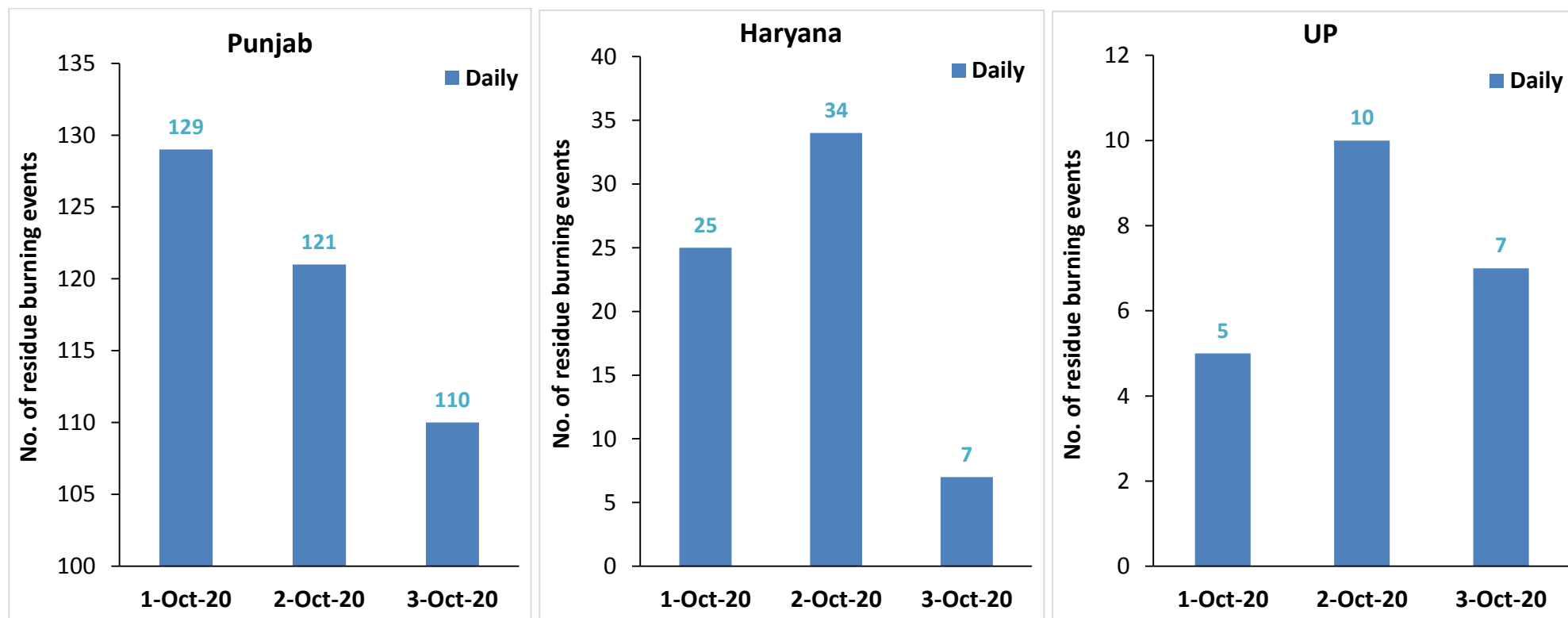
<http://creams.iari.res.in>



Highlights for 03-October-2020

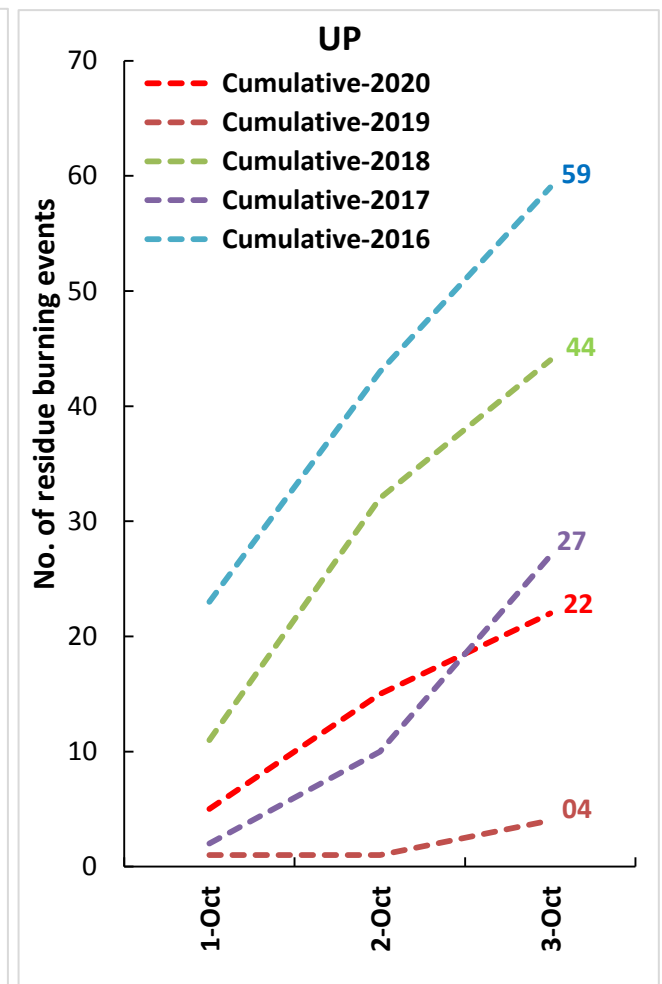
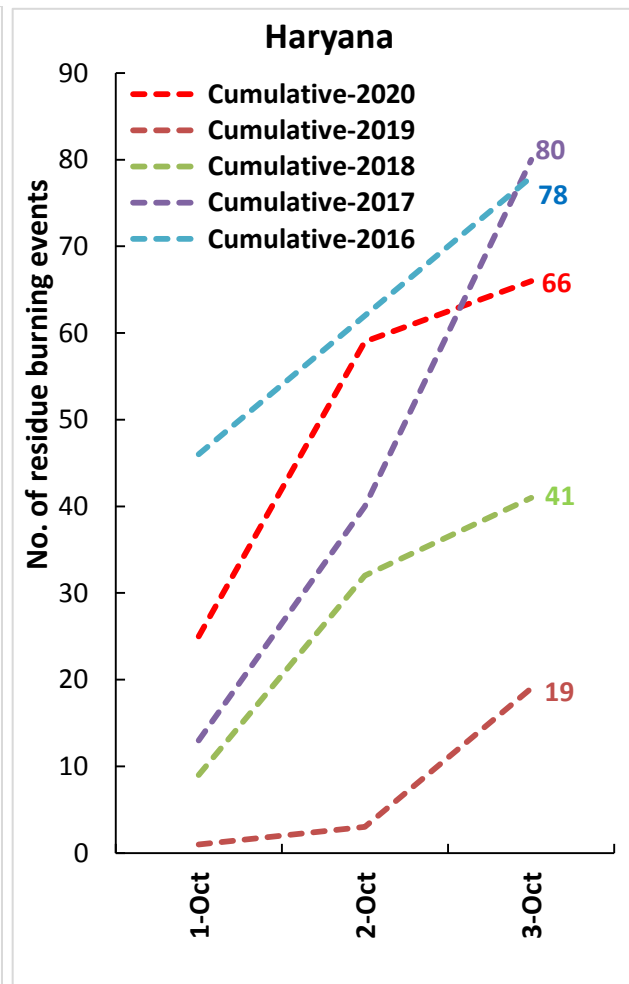
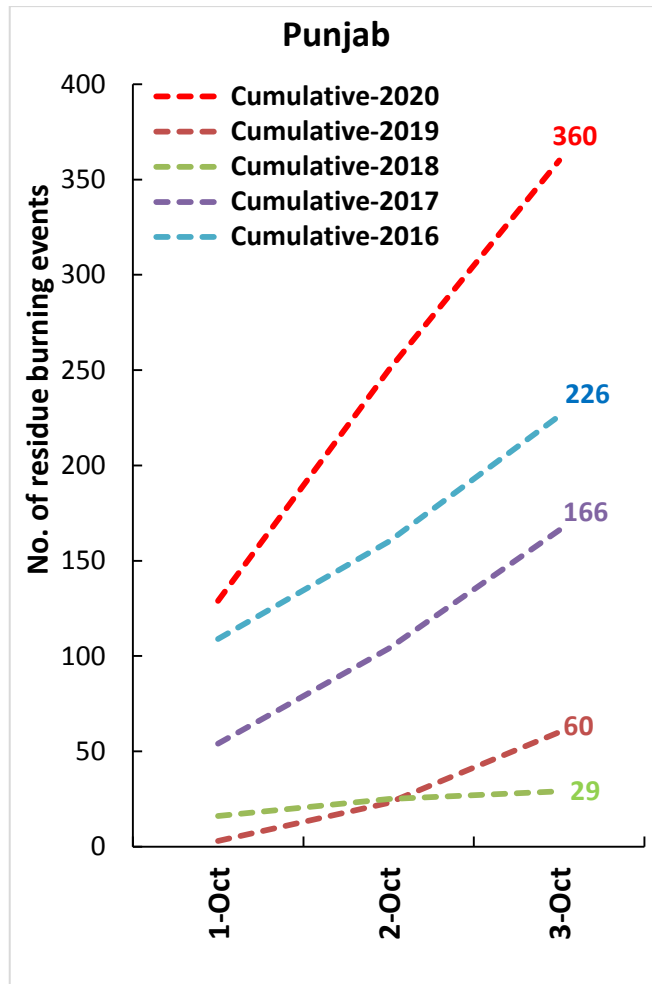
- Satellites detected **124** residue burning events in the three study States on **03-Oct-2020**.
- The state wise events detected were **110** in Punjab, **07** in Haryana and **07** in UP.
- In Punjab, burning/fire events were concentrated in Amritsar and Tarn Taran districts.
- In Haryana and Uttar Pradesh, the burning events were scattered.
- The number of burning events was highest on 3-Oct in Punjab in the last four years.

Temporal distribution of residue burning events for the three study States

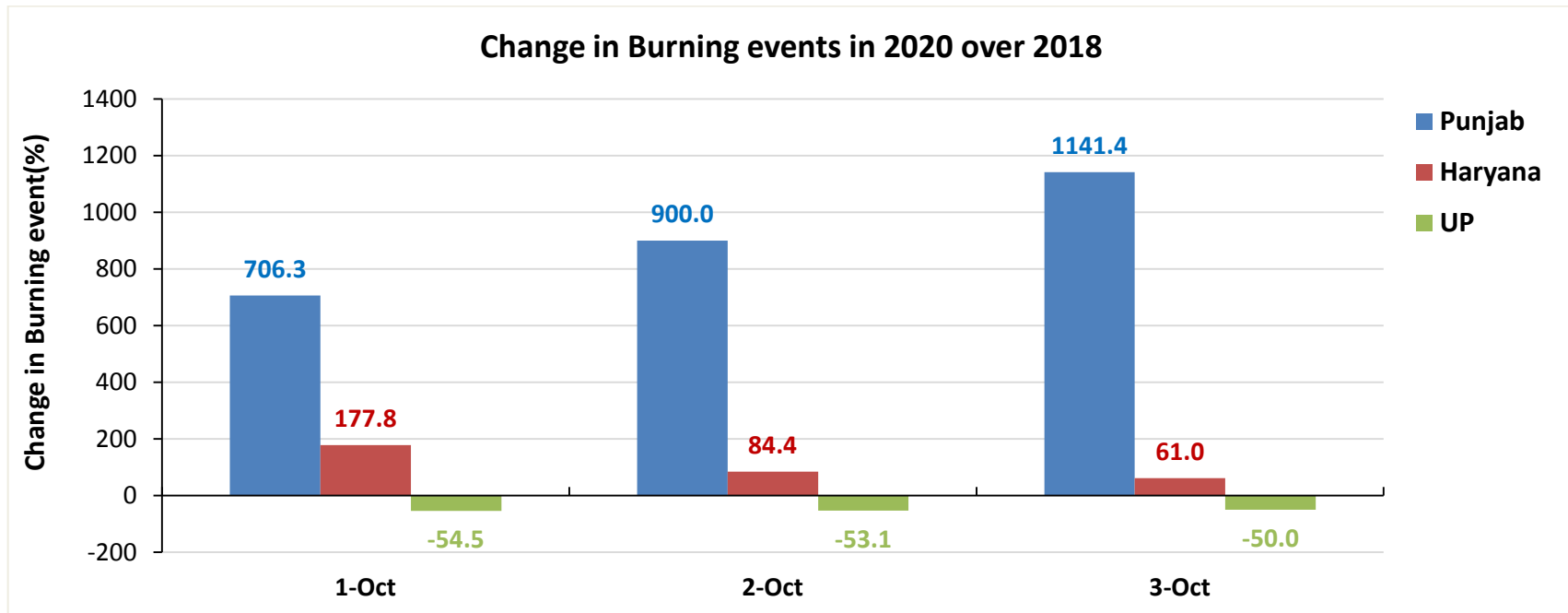
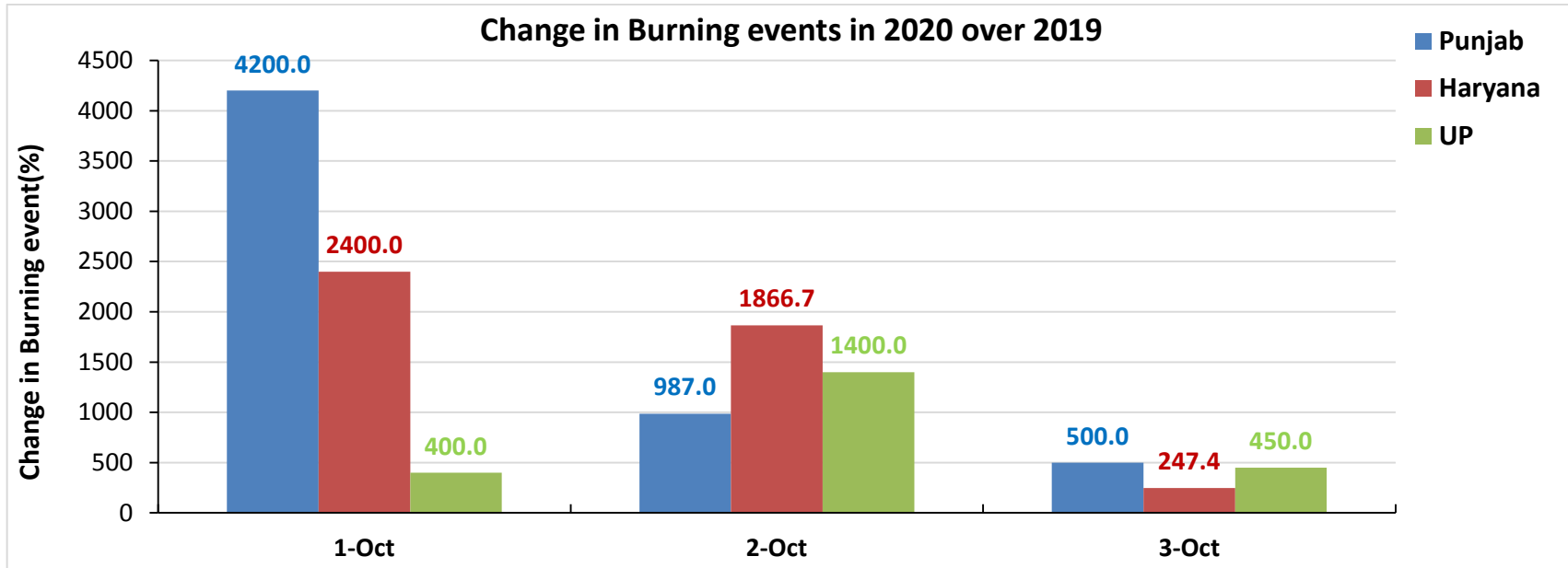


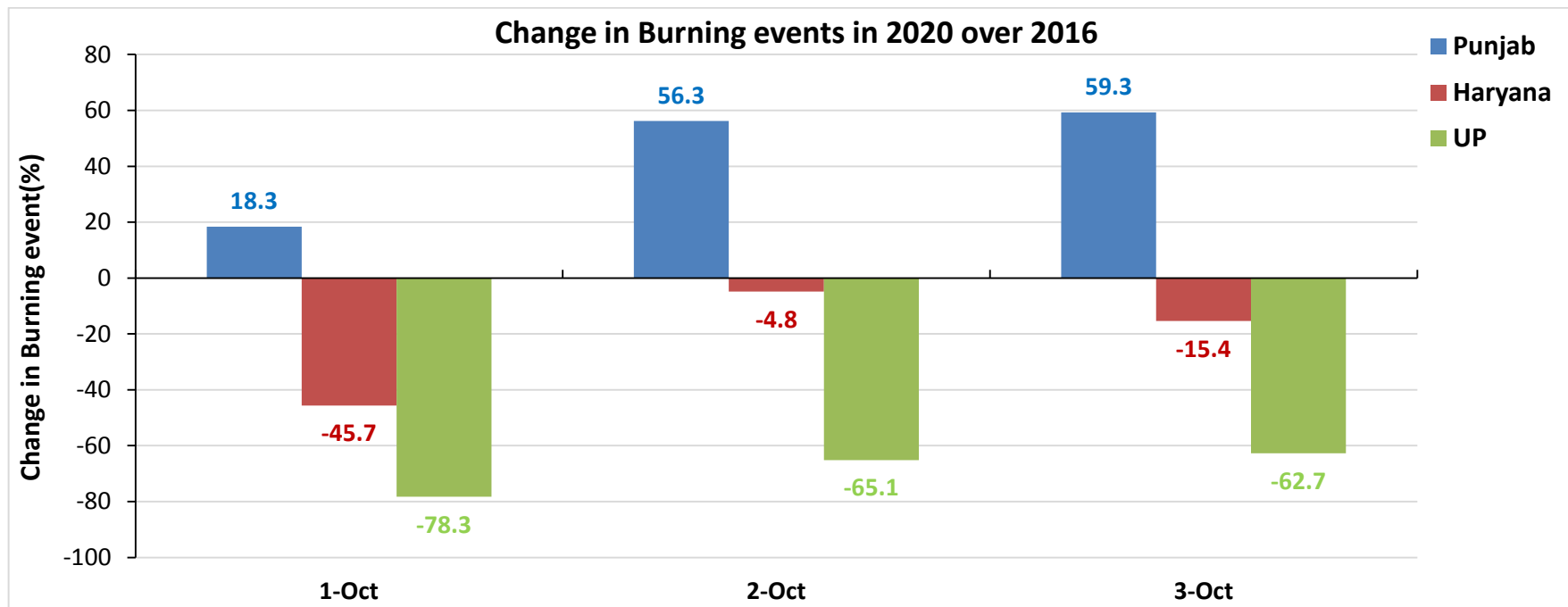
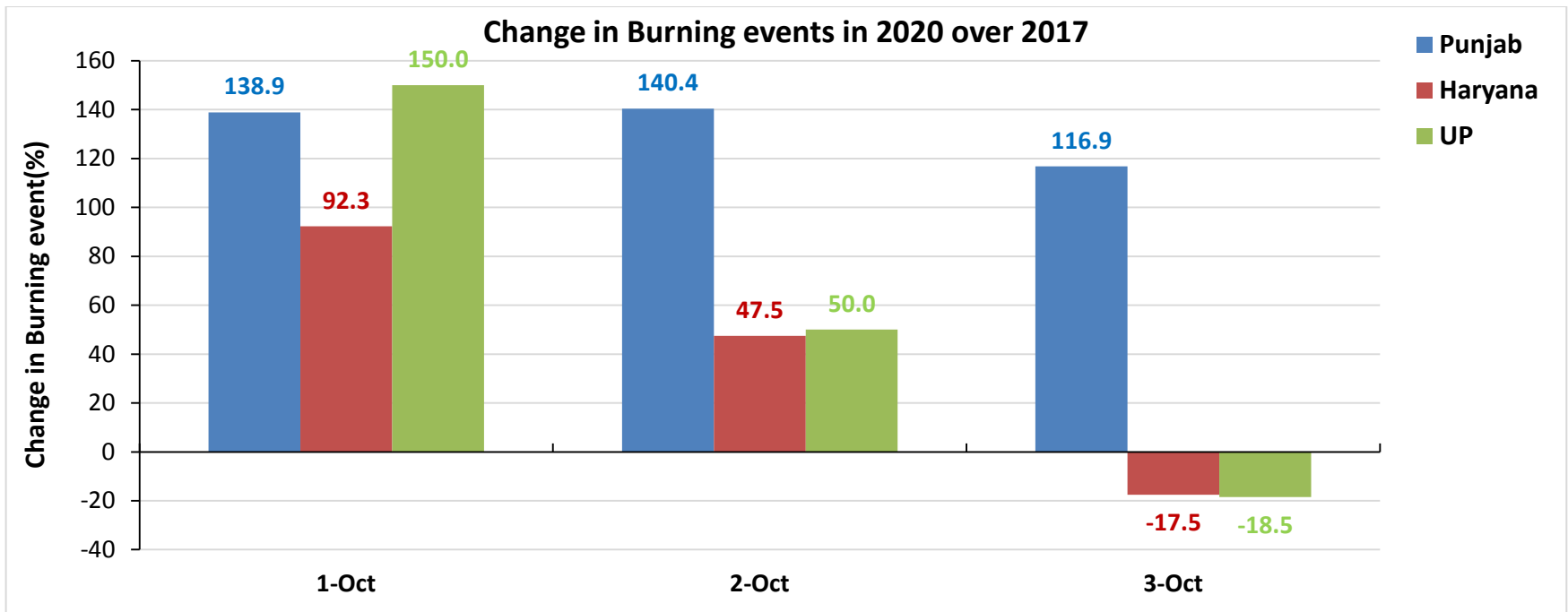
Comparison of residue burning events in current year (2020) with previous years (2019, 2018, 2017 & 2016) for the three study States

(01-Oct to 03-Oct)



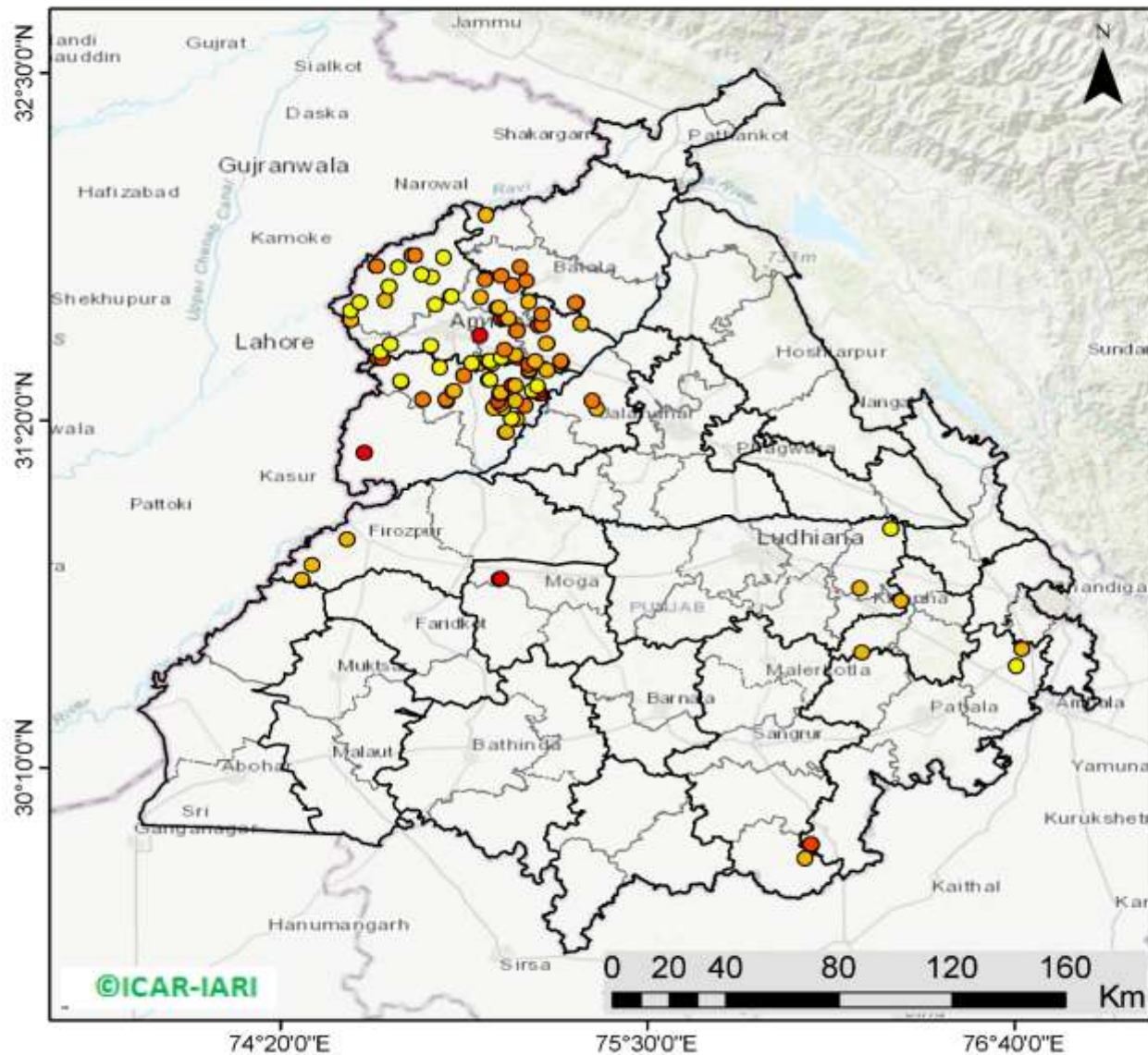
Percent Change in Burning events in 2020 over 2019, 2018, 2017 and 2016 (Daily Cumulative)





Punjab

RICE RESIDUE BURNING IN PUNJAB



110 burning events detected in Punjab on 03rd October 2020

Fire Intensity (W/m²)

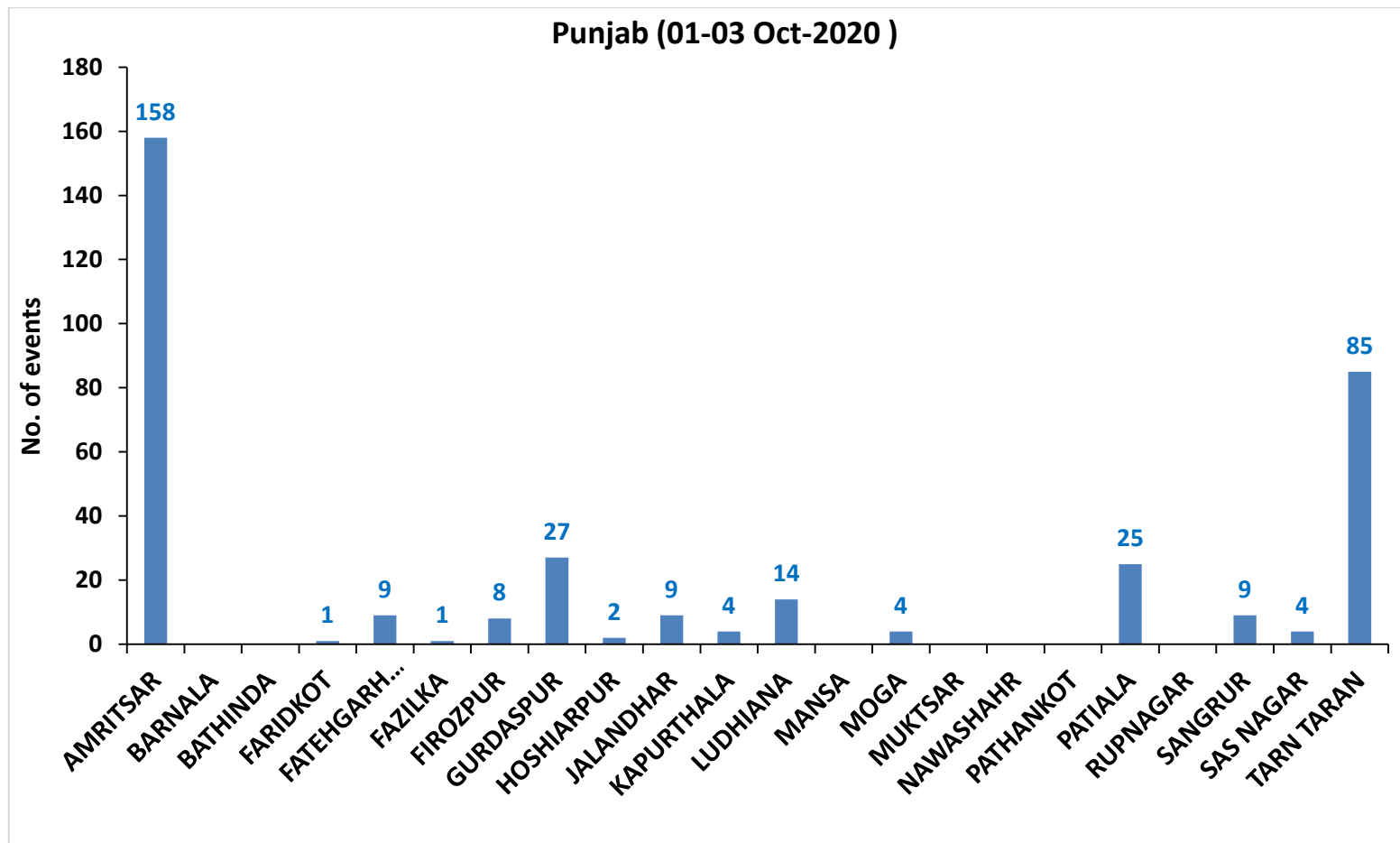
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20

©ICAR-IARI



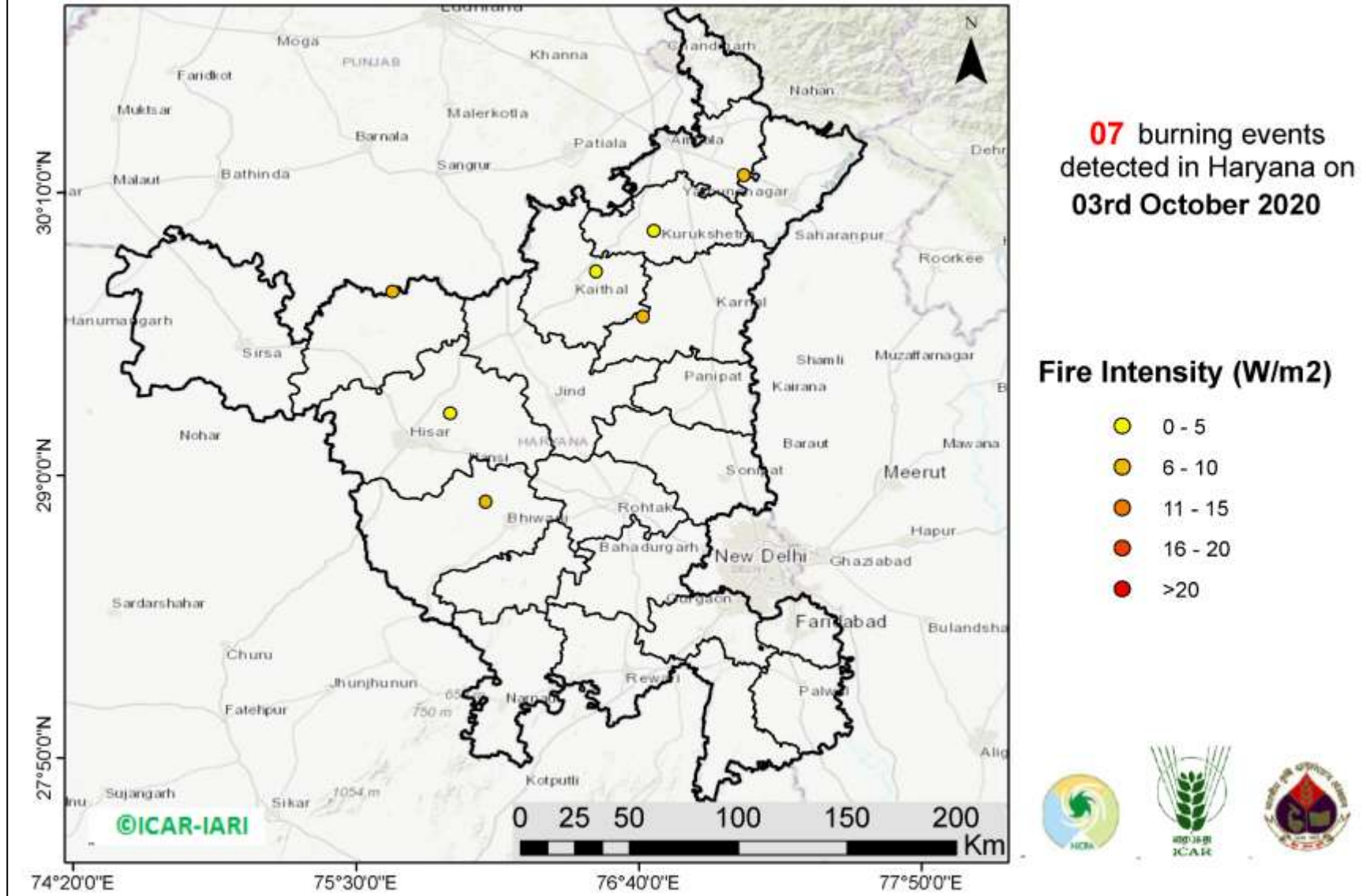
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residue burning events in Punjab (01-03 Oct-2020)



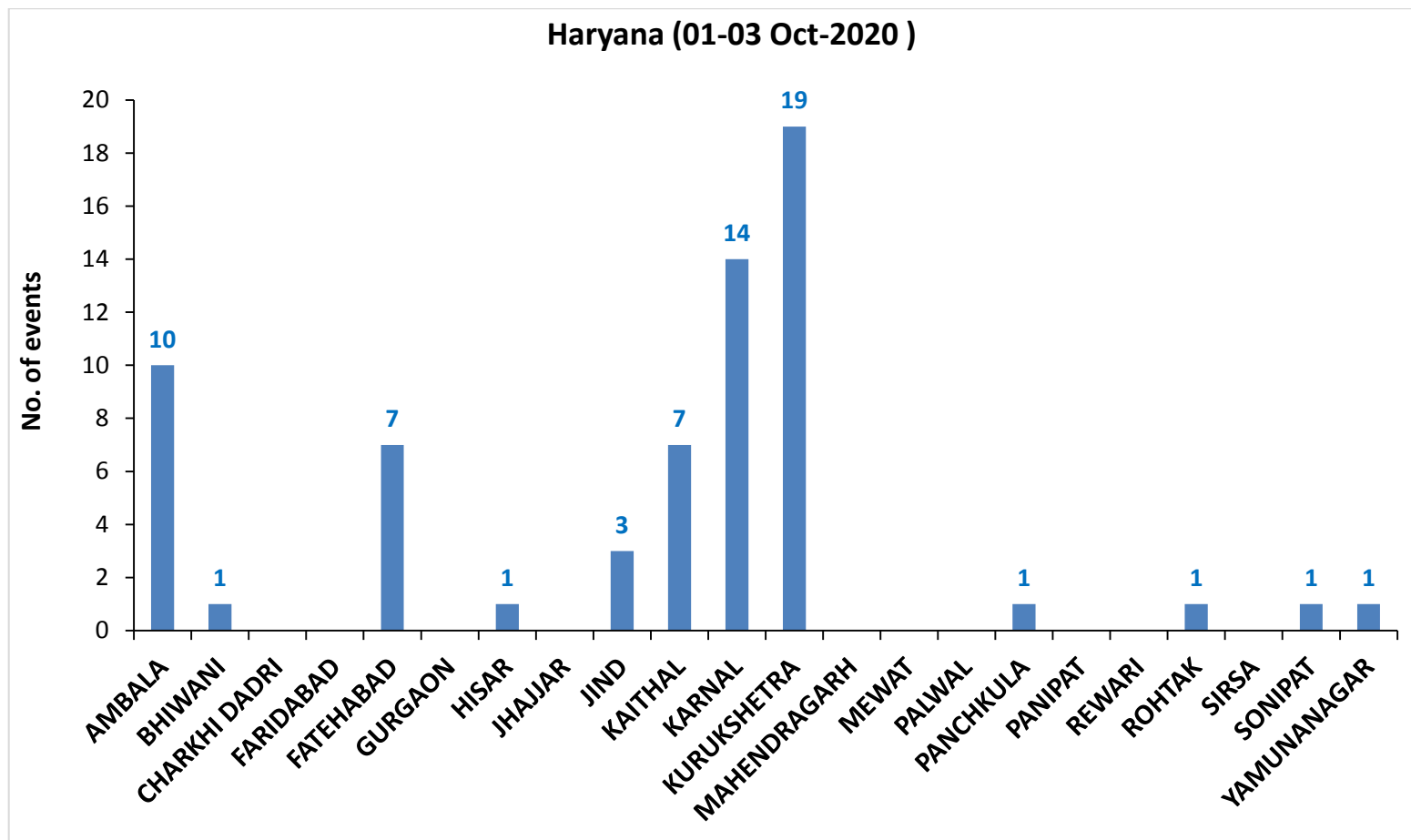
(b) Haryana

RICE RESIDUE BURNING IN HARYANA



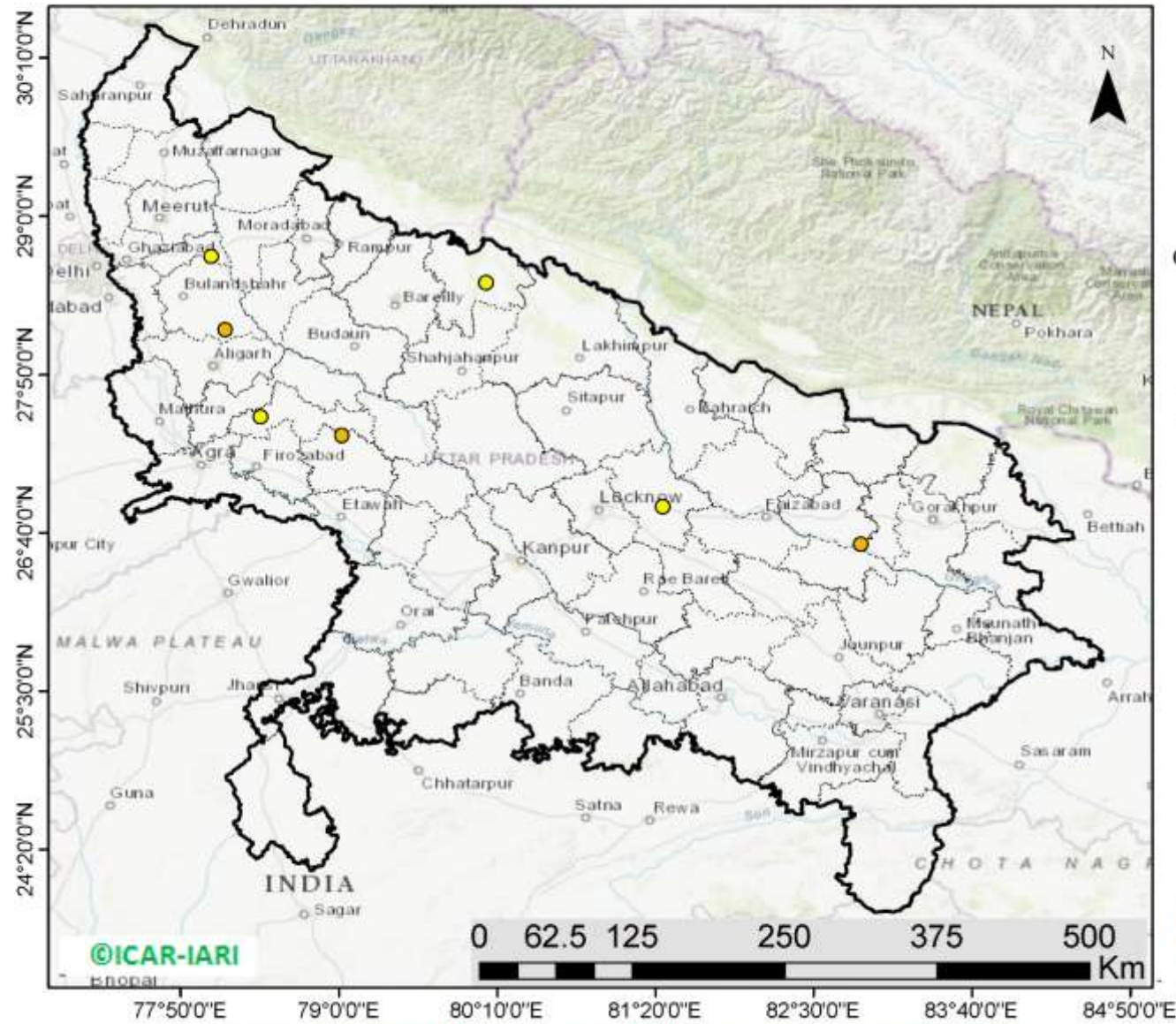
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residue burning events in Haryana (01-03 Oct-2020)



(c) Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



07 burning events detected in Uttar Pradesh on **03rd October 2020**

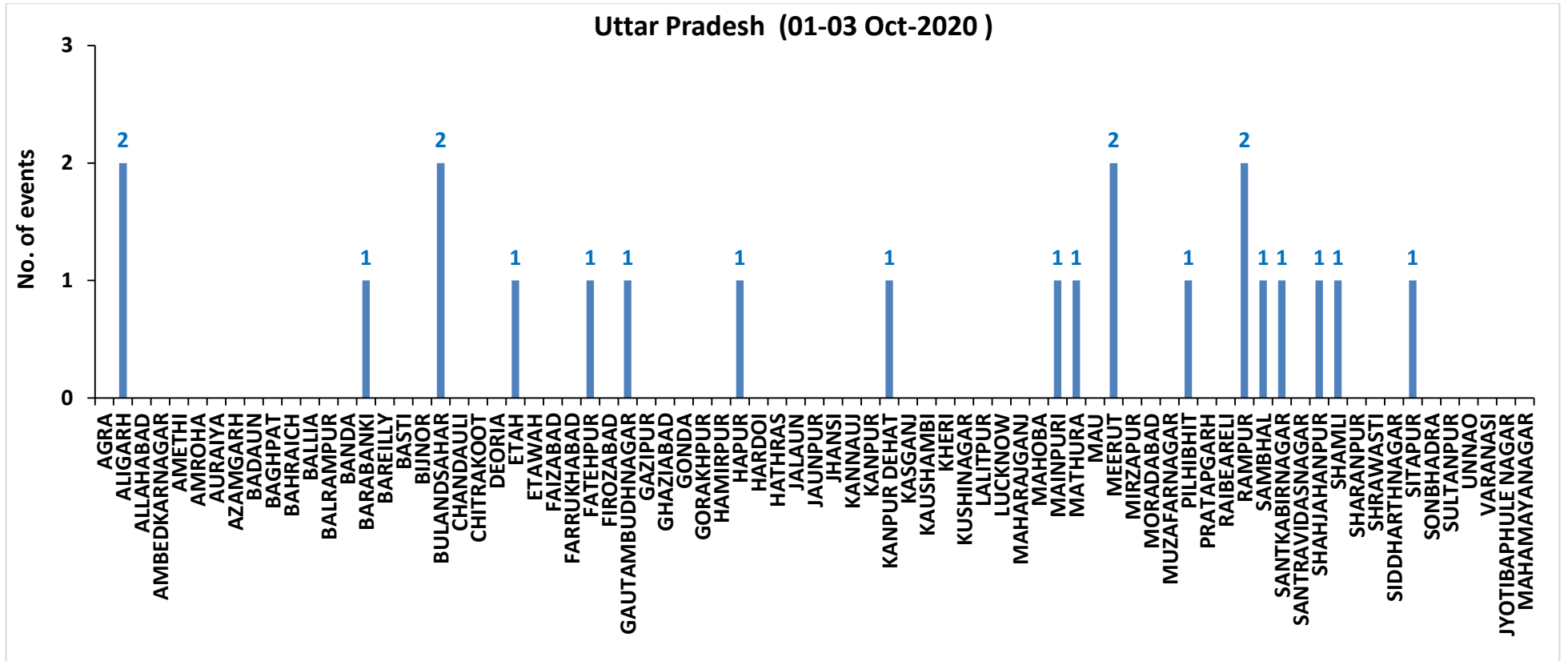
Fire Intensity (W/m²)

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



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

District-wise cumulative number of residue burning events in Uttar Pradesh (01-03 Oct-2020)



State-wise and date-wise number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020
(Period: 01-03 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
Total	360	60	29	166	226	66	19	41	80	78	22	4	44	27	59	448	83	114	273	363

District-wise and date wise number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020
(Period: 01-03 October)

(a) Punjab

Districts	01-03 Oct				
	2016	2017	2018	2019	2020
AMRITSAR	96	97	15	32	158
BARNALA	1	0	0	0	0
BATHINDA	4	2	4	0	0
FARIDKOT	3	2	0	0	1
FATEHGARH SAHIB	6	0	2	0	9
FAZILKA	0	0	0	1	1
FIROZPUR	13	3	2	0	8
GURDASPUR	2	1	1	0	27
HOSHIARPUR	1	0	2	0	2
JALANDHAR	8	2	0	0	9
KAPURTHALA	12	0	0	0	4
LUDHIANA	8	3	0	1	14
MANSA	4	0	0	0	0
MOGA	0	1	0	2	4
MUKTSAR	0	0	0	1	0
NAWASHAHR	0	0	1	1	0
PATHANKOT	0	0	0	0	0
PATIALA	8	5	0	1	25
RUPNAGAR	0	0	0	0	0
SANGRUR	7	4	0	0	9
SAS NAGAR	0	4	1	0	4
TARN TARAN	53	42	1	21	85
Total	226	166	29	60	360

(b) Haryana

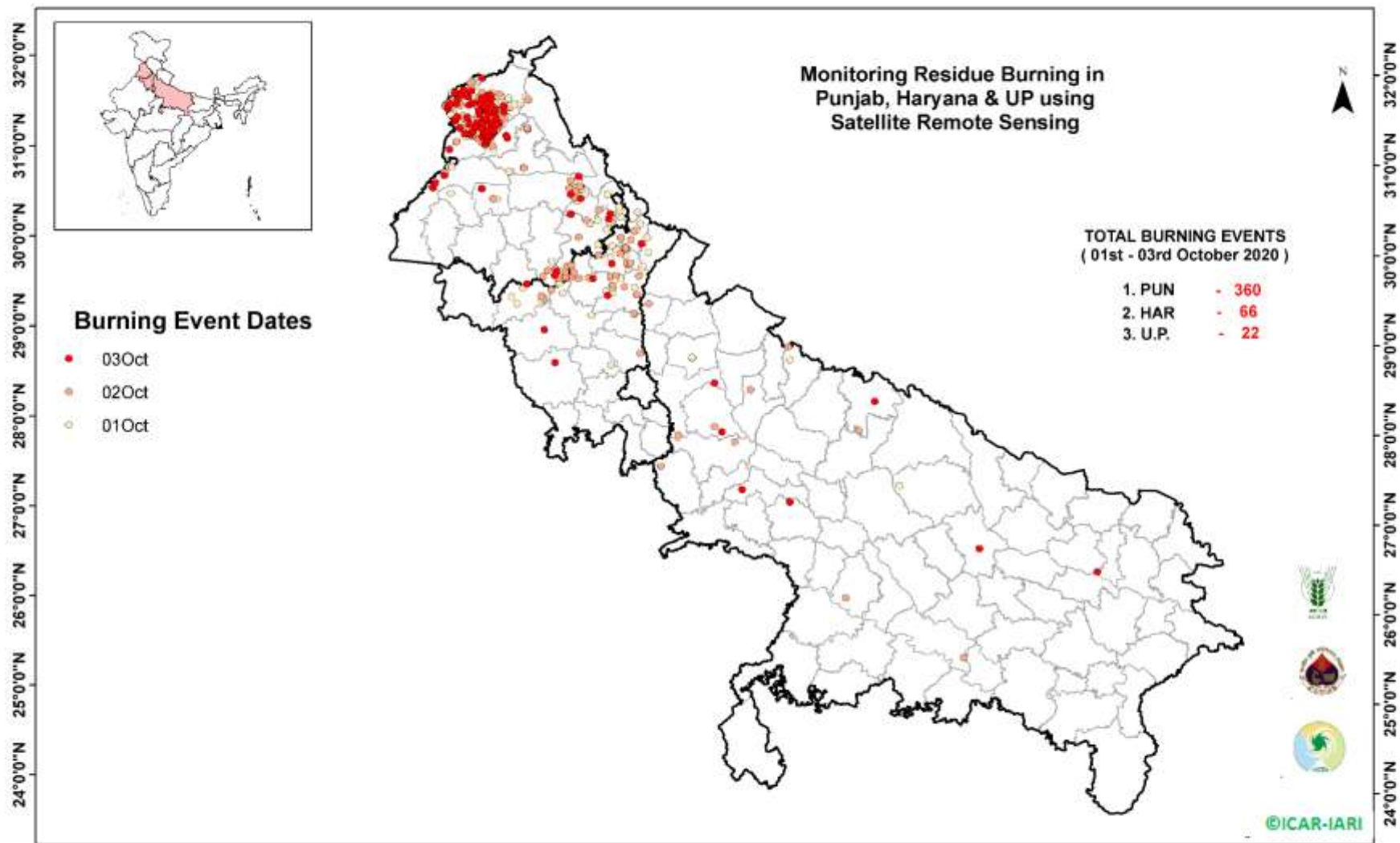
Districts	01-03 Oct				
	2016	2017	2018	2019	2020
AMBALA	5	6	9	1	10
BHIWANI	0	0	0	0	1
CHARKHI DADRI	0	0	0	0	0
FARIDABAD	0	0	1	0	0
FATEHABAD	1	7	0	3	7
GURGAON	0	0	0	0	0
HISAR	2	1	2	0	1
JHAJJAR	0	0	1	0	0
JIND	2	7	0	0	3
KAITHAL	16	4	1	2	7
KARNAL	34	24	10	5	14
KURUKSHETRA	15	24	10	8	19
MAHENDRAGARH	0	0	0	0	0
MEWAT	0	0	0	0	0
PALWAL	0	0	0	0	0
PANCHKULA	0	0	1	0	1
PANIPAT	1	5	3	0	0
REWARI	0	0	0	0	0
ROHTAK	0	0	0	0	1
SIRSA	0	0	0	0	0
SONIPAT	0	0	1	0	1
YAMUNANAGAR	2	2	2	0	1
Total	78	80	41	19	66

(C)

Uttar Pradesh

Districts	01-03 Oct																
	2016	2017	2018	2019	2020	GAUTAMBUDHNAGAR	1	0	1	0	1	MUZAFARNAGAR	3	3	0	0	0
AGRA	0	0	0	0	0	GAZIPUR	0	0	0	0	0	PILHIBHIT	6	3	0	2	1
ALIGARH	0	0	1	0	2	GHAZIABAD	0	0	1	0	0	PRATAPGARH	0	0	0	0	0
ALLAHABAD	0	0	0	0	0	GONDA	0	0	0	0	0	RAIBEARELI	0	0	0	0	0
AMBEDKARNAGAR	0	0	0	0	0	GORAKHPUR	0	0	2	0	0	RAMPUR	17	4	4	0	2
AMETHI	0	0	0	0	0	HAMIRPUR	0	0	1	0	0	SAMBHAL	0	0	0	0	1
AMROHA	0	0	0	0	0	HAPUR	0	0	0	0	1	SANTKABIRNAGAR	0	0	0	0	1
AURAIYA	7	4	4	0	0	HARDOI	0	0	0	0	0	SANTRAVIDASNAGAR	0	0	0	0	0
AZAMGARH	0	0	0	0	0	HATHRAS	0	0	0	0	0	SHAHJAHANPUR	13	6	14	0	1
BADAUN	0	0	0	0	0	JALAUN	0	0	0	0	0	SHAMLI	0	0	0	0	1
BAGHPAT	0	0	0	0	0	JAUNPUR	0	0	0	0	0	SHARANPUR	2	0	0	0	0
BAHRAICH	0	0	0	0	0	JHANSI	0	0	0	0	0	SHRAWASTI	0	0	0	0	0
BALLIA	0	0	0	0	0	KANNAUJ	0	0	0	0	0	SIDDHARTHANAGAR	0	0	0	0	0
BALRAMPUR	0	0	0	0	0	KANPUR	0	0	0	0	0	SITAPUR	1	0	0	0	1
BANDA	0	0	1	0	0	KANPUR DEHAT	0	0	0	0	1	SONBHADRA	1	1	1	0	0
BARABANKI	2	0	2	0	1	KASGANJ	0	0	0	0	0	SULTANPUR	0	0	0	0	0
BAREILLY	4	0	0	1	0	KAUSHAMBI	0	0	2	0	0	UNNAO	0	0	0	0	0
BASTI	0	0	0	0	0	KHERI	2	4	3	0	0	VARANASI	0	0	0	0	0
BIJNOR	0	0	1	0	0	KUSHINAGAR	0	0	0	0	0	JYOTIBAPHULE NAGAR	0	0	0	0	0
BULANDSAHAR	0	1	0	0	2	LALITPUR	0	0	0	0	0	MAHAMAYANAGAR	0	0	0	0	0
CHANDAULI	0	0	0	0	0	LUCKNOW	0	0	0	0	0	Total	59	27	44	4	22
CHITRAKOOT	0	0	0	0	0	MAHARAJGANJ	0	0	0	0	0						
DEORIA	0	0	0	0	0	MAHOPA	0	0	0	0	0						
ETAH	0	0	0	0	1	MAINPURI	0	0	1	0	1						
ETAWAH	0	0	0	0	0	MATHURA	0	0	4	0	1						
FAIZABAD	0	0	0	0	0	MAU	0	0	0	0	0						
FARRUKHABAD	0	0	0	0	0	MEERUT	0	0	0	0	2						
FATEHPUR	0	0	0	0	1	MIRZAPUR	0	1	0	0	0						
FIROZABAD	0	0	0	0	0	MORADABAD	0	0	1	1	0						

Map of Cumulative Burning Events (01-03 Oct 2020)



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

Details of residue burning events in Punjab on 03-Oct-2020

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m²)
1	AMRITSAR	AJNALA	AQUA	74.55800	31.66900	13:50:00	D	6.70
2	AMRITSAR	AJNALA	S-NPP	74.55679	31.69985	12:54:00	D	1.90
3	AMRITSAR	AJNALA	S-NPP	74.82583	31.72136	12:54:00	D	2.50
4	AMRITSAR	AJNALA	S-NPP	74.58511	31.72812	12:54:00	D	3.80
5	AMRITSAR	AJNALA	AQUA	74.66700	31.73600	13:50:00	D	6.10
6	AMRITSAR	AJNALA	S-NPP	74.67876	31.78234	12:54:00	D	4.00
7	AMRITSAR	AJNALA	S-NPP	74.81428	31.81400	12:54:00	D	1.90
8	AMRITSAR	AJNALA	S-NPP	74.78262	31.82251	12:54:00	D	1.40
9	AMRITSAR	AJNALA	S-NPP	74.70825	31.84562	12:54:00	D	2.10
10	AMRITSAR	AJNALA	S-NPP	74.63710	31.85009	12:54:00	D	9.10
11	AMRITSAR	AJNALA	S-NPP	74.64052	31.85090	12:54:00	D	10.10
12	AMRITSAR	AJNALA	S-NPP	74.85268	31.87980	12:54:00	D	1.50
13	AMRITSAR	AJNALA	AQUA	74.75100	31.88700	13:50:00	D	7.90
14	AMRITSAR	AJNALA	AQUA	74.76200	31.88800	13:50:00	D	12.00
15	AMRITSAR	AMRITSAR I	S-NPP	74.96846	31.52448	14:30:00	D	5.60
16	AMRITSAR	AMRITSAR I	S-NPP	74.99578	31.53142	12:54:00	D	3.20
17	AMRITSAR	AMRITSAR I	S-NPP	74.99680	31.53193	12:54:00	D	3.70
18	AMRITSAR	AMRITSAR I	S-NPP	74.99909	31.53221	12:54:00	D	4.20
19	AMRITSAR	AMRITSAR I	S-NPP	75.03491	31.54357	14:30:00	D	3.80
20	AMRITSAR	AMRITSAR I	AQUA	75.08100	31.55200	13:50:00	D	5.70
21	AMRITSAR	AMRITSAR I	S-NPP	75.04610	31.56947	14:30:00	D	11.80
22	AMRITSAR	AMRITSAR I	AQUA	74.96900	31.61900	13:50:00	D	27.80
23	AMRITSAR	AMRITSAR I	AQUA	75.03600	31.67200	13:50:00	D	19.60
24	AMRITSAR	AMRITSAR I	AQUA	75.04800	31.67400	13:50:00	D	23.60
25	AMRITSAR	AMRITSAR I	AQUA	75.05900	31.67500	13:50:00	D	7.40
26	AMRITSAR	AMRITSAR I	S-NPP	75.02122	31.70998	12:54:00	D	15.10
27	AMRITSAR	AMRITSAR I	S-NPP	75.02777	31.71152	12:54:00	D	5.80
28	AMRITSAR	AMRITSAR I	AQUA	74.97000	31.74600	13:50:00	D	6.60
29	AMRITSAR	AMRITSAR I	S-NPP	74.87461	31.74888	12:54:00	D	2.30
30	AMRITSAR	AMRITSAR I	S-NPP	74.87794	31.74967	12:54:00	D	3.30

31	AMRITSAR	AMRITSAR I	AQUA	75.07100	31.78700	13:50:00	D	11.20
32	AMRITSAR	AMRITSAR I	AQUA	74.98400	31.80500	13:50:00	D	10.30
33	AMRITSAR	AMRITSAR II	S-NPP	74.94196	31.52451	12:54:00	D	3.40
34	AMRITSAR	AMRITSAR II	AQUA	74.64500	31.54100	13:50:00	D	13.90
35	AMRITSAR	AMRITSAR II	AQUA	74.65600	31.54200	13:50:00	D	17.50
36	AMRITSAR	AMRITSAR II	S-NPP	74.65126	31.56178	12:54:00	D	1.40
37	AMRITSAR	AMRITSAR II	S-NPP	74.81036	31.58294	14:30:00	D	3.70
38	AMRITSAR	AMRITSAR II	S-NPP	74.68291	31.58740	12:54:00	D	2.60
39	AMRITSAR	AMRITSAR II	AQUA	74.95500	31.66200	13:50:00	D	71.30
40	AMRITSAR	BABA BAKALA	S-NPP	75.12449	31.49677	14:30:00	D	7.20
41	AMRITSAR	BABA BAKALA	S-NPP	75.12425	31.50390	14:30:00	D	9.70
42	AMRITSAR	BABA BAKALA	AQUA	75.12200	31.51900	13:50:00	D	16.50
43	AMRITSAR	BABA BAKALA	S-NPP	75.22881	31.52884	14:30:00	D	14.40
44	AMRITSAR	BABA BAKALA	AQUA	75.14400	31.53100	13:50:00	D	7.20
45	AMRITSAR	BABA BAKALA	S-NPP	75.22501	31.53191	14:30:00	D	11.40
46	AMRITSAR	BABA BAKALA	S-NPP	75.18041	31.58986	12:54:00	D	5.30
47	AMRITSAR	BABA BAKALA	S-NPP	75.17888	31.59054	12:54:00	D	8.90
48	AMRITSAR	BABA BAKALA	AQUA	75.08500	31.63400	13:50:00	D	10.60
49	AMRITSAR	BABA BAKALA	AQUA	75.15400	31.65200	13:50:00	D	19.20
50	AMRITSAR	BABA BAKALA	AQUA	75.16600	31.65400	13:50:00	D	13.50
51	AMRITSAR	BABA BAKALA	S-NPP	75.28831	31.65762	12:54:00	D	6.10
52	AMRITSAR	BABA BAKALA	AQUA	75.16500	31.68800	13:50:00	D	10.80
53	AMRITSAR	BABA BAKALA	AQUA	75.12200	31.73100	13:50:00	D	5.70
54	FATEHGARH SAHIB	ALMOH	S-NPP	76.18142	30.55239	12:54:00	D	7.80
55	FATEHGARH SAHIB	KHAMANOH	S-NPP	76.30596	30.72575	12:54:00	D	6.00
56	FAZILKA	JALALABAD	S-NPP	74.40224	30.79306	12:54:00	D	5.60
57	FIROZPUR	FIROZPUR	S-NPP	74.40060	30.79822	12:54:00	D	5.60
58	FIROZPUR	FIROZPUR	S-NPP	74.43423	30.84584	14:30:00	D	8.20
59	FIROZPUR	FIROZPUR	AQUA	74.54500	30.93300	13:50:00	D	5.60
60	GURDASPUR	BATALA	S-NPP	75.27349	31.72647	12:54:00	D	13.30
61	GURDASPUR	BATALA	S-NPP	75.27180	31.72705	12:54:00	D	10.30
62	GURDASPUR	BATALA	AQUA	75.11600	31.80200	13:50:00	D	11.20
63	GURDASPUR	BATALA	S-NPP	75.03495	31.81822	12:54:00	D	12.40

64	GURDASPUR	BATALA	AQUA	75.09600	31.84800	13:50:00	D	11.00
65	GURDASPUR	DERA BABA NANAK	AQUA	74.98700	32.02300	13:50:00	D	9.10
66	KAPURTHALA	KAPURTHALA	AQUA	75.34000	31.37200	13:50:00	D	9.80
67	KAPURTHALA	KAPURTHALA	AQUA	75.32400	31.39900	13:50:00	D	12.00
68	LUDHIANA	SAMRALA	AQUA	76.17600	30.77000	13:50:00	D	10.00
69	LUDHIANA	SAMRALA	S-NPP	76.27381	30.96783	12:54:00	D	4.50
70	MOGA	MOGA	S-NPP	75.02969	30.79966	12:54:00	D	13.40
71	MOGA	MOGA	S-NPP	75.03309	30.80046	12:54:00	D	27.10
72	PATIALA	RAJPURA	S-NPP	76.67284	30.50743	12:54:00	D	3.30
73	PATIALA	RAJPURA	S-NPP	76.69143	30.56505	12:54:00	D	6.50
74	PATIALA	SAMANA	S-NPP	76.02197	29.90781	12:54:00	D	11.20
75	PATIALA	SAMANA	S-NPP	76.01959	29.90891	12:54:00	D	17.00
76	SANGRUR	MOONAK	S-NPP	76.00231	29.86232	12:54:00	D	6.60
77	TARN TARAN	KHADOOR SAHIB	S-NPP	75.04871	31.29220	12:54:00	D	5.20
78	TARN TARAN	KHADOOR SAHIB	S-NPP	75.05204	31.29297	12:54:00	D	5.20
79	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08302	31.33696	12:54:00	D	7.40
80	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08430	31.33734	12:54:00	D	6.90
81	TARN TARAN	KHADOOR SAHIB	S-NPP	75.06823	31.33834	14:30:00	D	4.40
82	TARN TARAN	KHADOOR SAHIB	AQUA	75.04100	31.37300	13:50:00	D	6.50
83	TARN TARAN	KHADOOR SAHIB	S-NPP	75.01103	31.37580	14:30:00	D	6.10
84	TARN TARAN	KHADOOR SAHIB	AQUA	75.11100	31.38200	13:50:00	D	10.90
85	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03149	31.38809	12:54:00	D	4.70
86	TARN TARAN	KHADOOR SAHIB	S-NPP	75.02609	31.39760	14:30:00	D	15.10
87	TARN TARAN	KHADOOR SAHIB	S-NPP	74.86179	31.39891	14:30:00	D	5.60
88	TARN TARAN	KHADOOR SAHIB	S-NPP	75.08169	31.39950	14:30:00	D	6.00
89	TARN TARAN	KHADOOR SAHIB	AQUA	74.78500	31.40300	13:50:00	D	15.00
90	TARN TARAN	KHADOOR SAHIB	S-NPP	74.85951	31.40329	14:30:00	D	11.20
91	TARN TARAN	KHADOOR SAHIB	AQUA	75.15800	31.42100	13:50:00	D	13.70
92	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03120	31.42262	14:30:00	D	6.90
93	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03307	31.42626	14:30:00	D	6.50
94	TARN TARAN	KHADOOR SAHIB	S-NPP	75.13675	31.42991	14:30:00	D	6.60
95	TARN TARAN	KHADOOR SAHIB	AQUA	75.15600	31.43000	13:50:00	D	22.70
96	TARN TARAN	KHADOOR SAHIB	S-NPP	74.88142	31.43081	12:54:00	D	8.90

97	TARN TARAN	KHADOOR SAHIB	S-NPP	74.88480	31.43161	12:54:00	D	8.90
98	TARN TARAN	KHADOOR SAHIB	S-NPP	75.13467	31.43281	14:30:00	D	4.70
99	TARN TARAN	KHADOOR SAHIB	S-NPP	75.15025	31.44756	14:30:00	D	4.70
100	TARN TARAN	KHADOOR SAHIB	AQUA	75.07000	31.44900	13:50:00	D	38.30
101	TARN TARAN	KHADOOR SAHIB	AQUA	75.08100	31.45000	13:50:00	D	8.40
102	TARN TARAN	KHADOOR SAHIB	S-NPP	74.71765	31.46165	12:54:00	D	4.10
103	TARN TARAN	KHADOOR SAHIB	S-NPP	74.71586	31.46432	12:54:00	D	4.90
104	TARN TARAN	KHADOOR SAHIB	S-NPP	74.99550	31.46836	12:54:00	D	3.50
105	TARN TARAN	KHADOOR SAHIB	S-NPP	74.99881	31.46914	12:54:00	D	4.40
106	TARN TARAN	KHADOOR SAHIB	AQUA	74.91600	31.48300	13:50:00	D	11.50
107	TARN TARAN	KHADOOR SAHIB	S-NPP	75.18046	31.50132	12:54:00	D	5.30
108	TARN TARAN	KHADOOR SAHIB	S-NPP	74.84067	31.51031	12:54:00	D	5.00
109	TARN TARAN	KHADOOR SAHIB	S-NPP	75.00656	31.52366	12:54:00	D	3.30
110	TARN TARAN	PATTI	AQUA	74.60000	31.22400	13:50:00	D	22.10

Details of residue burning events in Haryana on 03-Oct-2020

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	AMBALA	BARARA	S-NPP	77.10034	30.23849	12:54:00	D	8.30
2	BHIWANI	BAWANI_KHERA	S-NPP	76.03429	28.89118	12:54:00	D	8.50
3	FATEHABAD	RATIA	S-NPP	75.64960	29.75789	14:30:00	D	7.00
4	HISAR	HANSI	S-NPP	75.88847	29.25531	12:54:00	D	2.70
5	KAITHAL	KAITHAL	S-NPP	76.49036	29.84156	12:54:00	D	2.50
6	KARNAL	ASSANDH	S-NPP	76.68425	29.65509	12:54:00	D	5.30
7	KURUKSHETRA	THANESAR	S-NPP	76.72772	30.00931	12:54:00	D	3.00

Details of residue burning events in Uttar Pradesh on 03-Oct-2020

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	BARABANKI	NAWABGANJ	S-NPP	81.38663	26.85977	12:48:00	D	3.30
2	BULANSAHAR	SHIKARPUR	METOP-2	78.16149	28.16092	20:12:00	N	8.00
3	ETAH	JALESAR	S-NPP	78.42101	27.51927	12:48:00	D	3.80
4	HAPUR	GARHMUKTESAR	S-NPP	78.05833	28.70117	01:36:00	N	0.50
5	MAINPURI	MAINPURI	S-NPP	79.02116	27.38422	12:48:00	D	9.40
6	PILHIBHIT	PURANPUR	S-NPP	80.08501	28.50975	01:36:00	N	0.90
7	SANTKABIRNAGAR	GHANGHATA	METOP-2	82.84941	26.57988	20:12:00	N	7.00

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

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)
