



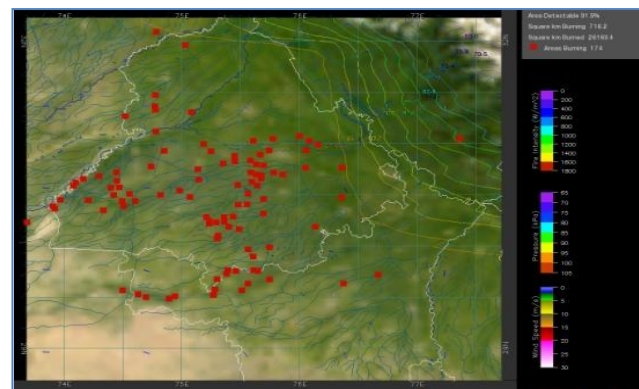
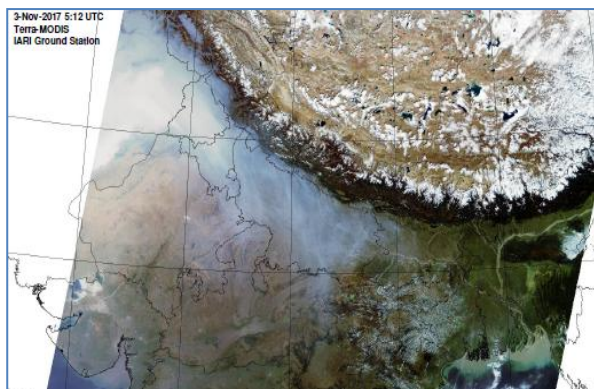
**Bulletin
No. 4**

**Events Date:
04-Oct-2018**

**Issued on:
05-Oct-2018**



MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2018



Prepared by:

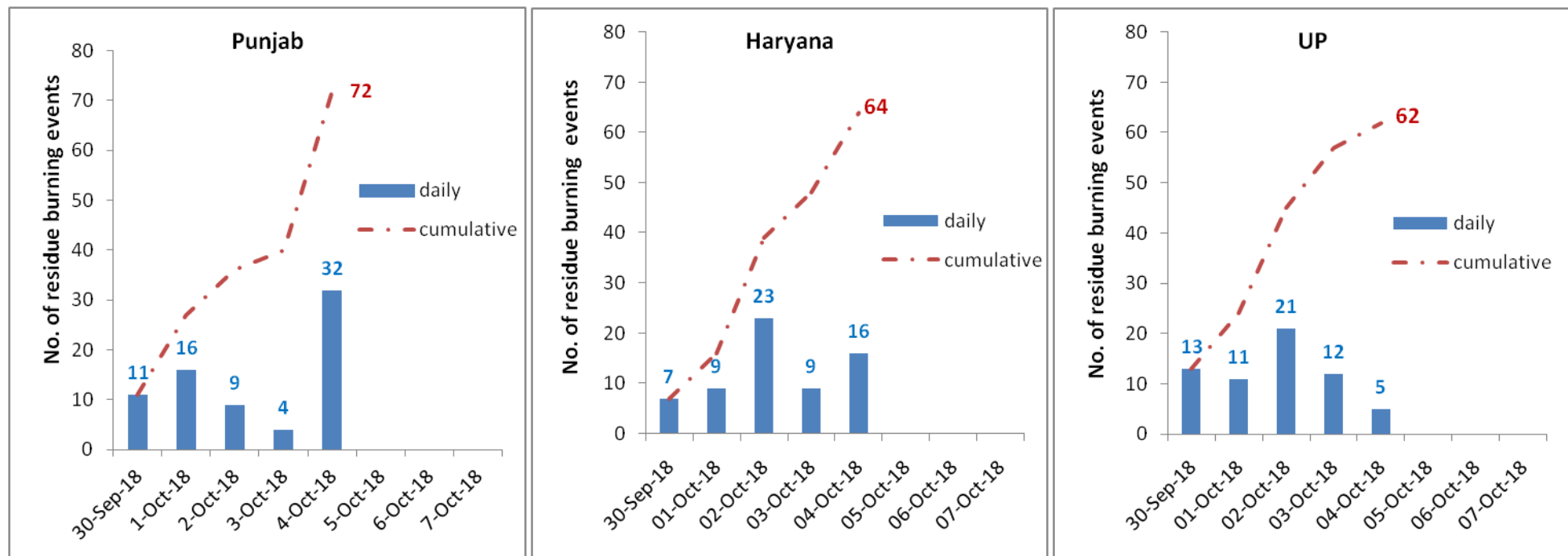
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Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

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

Highlights for 04-October-2018

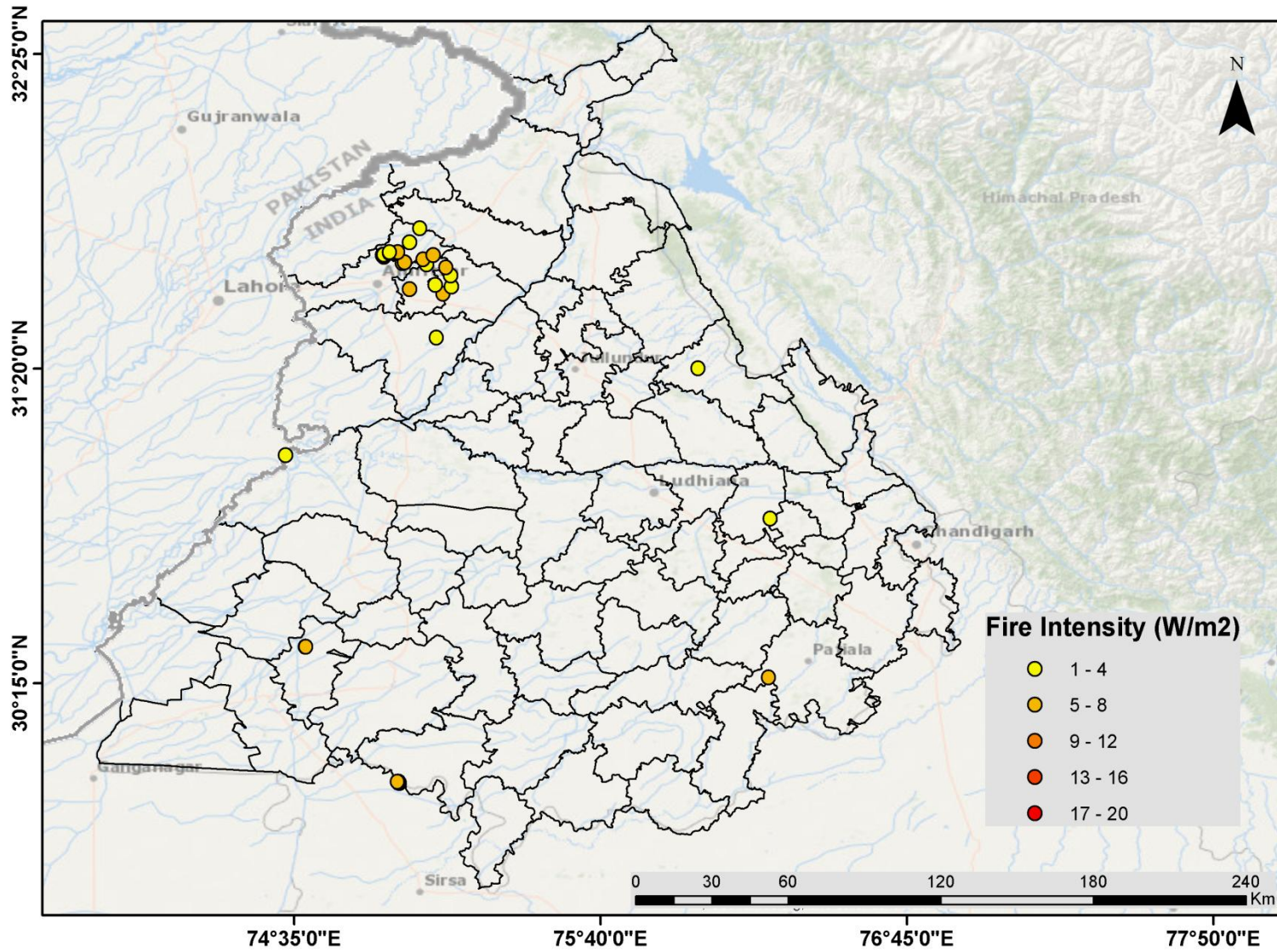
- Satellites detected 53 residue burning events in the three States (Punjab, Haryana & UP) on 04-Oct-2018.
- The burning events detected on 04-Oct-2018 are 32, 16 and 5 in Punjab, Haryana, and UP, respectively.
- The number of events increased from 25 on 03-Oct-2018 to 53 on 04-Oct-2018 in the three States.
- Total 198 burning events were detected in three States between 30-Sept-2018 and 04-Oct-2018, which were distributed as 72, 64 and 62 in Punjab, Haryana and UP, respectively.
- Overall, the residue burning/fire events are few till date in the three States being monitored.

Temporal distribution of residue burning events for the three study States



(a) Punjab

Paddy Residue Burning in Punjab on 4th Oct 2018

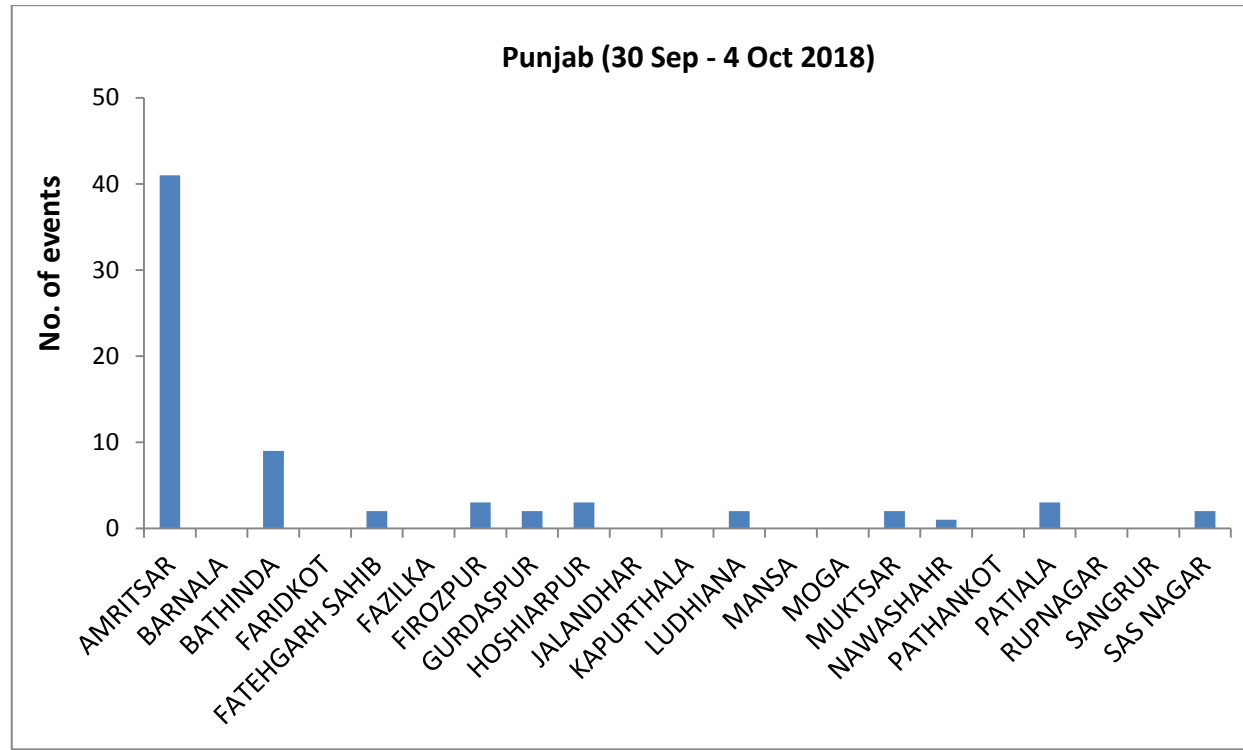


Details of residue burning events in Punjab on 04-Oct-2018

Events S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	BATHINDA	BATHINDA	S-NPP	74.95568	29.90696	03:00:00	N	1.30
2	BATHINDA	BATHINDA	S-NPP	74.95255	29.90803	14:18:00	D	3.50
3	BATHINDA	BATHINDA	S-NPP	74.95078	29.90822	03:00:00	N	1.90
4	BATHINDA	BATHINDA	S-NPP	74.95242	29.91054	03:00:00	N	2.10
5	BATHINDA	BATHINDA	S-NPP	74.94810	29.91153	12:42:00	D	6.80
6	PATIALA	PATIALA	S-NPP	76.26004	30.27072	12:42:00	D	5.00
7	MUKTSAR	MUKTSAR	S-NPP	74.62313	30.37569	14:18:00	D	6.70
8	MUKTSAR	MUKTSAR	S-NPP	74.62441	30.37590	14:18:00	D	6.40
9	LUDHIANA	LUDHIANA	S-NPP	76.26587	30.81756	14:18:00	D	3.20
10	FIROZPUR	FIROZPUR	S-NPP	74.55220	31.03483	14:18:00	D	2.20
11	HOSHIARPUR	HOSHIARPUR	S-NPP	76.01103	31.33472	12:42:00	D	3.20
12	TARN TARAN	TARN TARAN	S-NPP	75.08558	31.43954	12:42:00	D	2.50
13	AMRITSAR	AMRITSAR	S-NPP	75.10966	31.59035	14:18:00	D	7.40
14	AMRITSAR	AMRITSAR	S-NPP	74.98985	31.60764	14:18:00	D	5.20
15	AMRITSAR	AMRITSAR	S-NPP	75.13915	31.61622	14:18:00	D	3.00
16	AMRITSAR	AMRITSAR	S-NPP	75.08162	31.62178	12:42:00	D	2.60
17	AMRITSAR	AMRITSAR	S-NPP	75.13634	31.65415	14:18:00	D	3.50
18	AMRITSAR	AMRITSAR	S-NPP	75.11931	31.68186	12:42:00	D	4.20
19	AMRITSAR	AMRITSAR	S-NPP	75.05055	31.69181	14:18:00	D	3.20
20	AMRITSAR	AMRITSAR	S-NPP	74.96545	31.69584	12:42:00	D	4.70
21	AMRITSAR	AMRITSAR	S-NPP	74.97278	31.69946	14:18:00	D	6.50
22	AMRITSAR	AMRITSAR	S-NPP	75.03898	31.70926	14:18:00	D	4.30
23	AMRITSAR	AMRITSAR	S-NPP	74.90013	31.71923	14:18:00	D	5.10
24	AMRITSAR	AMRITSAR	S-NPP	74.89619	31.72152	14:18:00	D	12.60
25	AMRITSAR	AMRITSAR	S-NPP	75.07393	31.72453	12:42:00	D	5.50
26	AMRITSAR	AMRITSAR	S-NPP	74.89466	31.72489	14:18:00	D	3.30
27	AMRITSAR	AMRITSAR	S-NPP	74.89970	31.72519	14:18:00	D	3.30
28	AMRITSAR	AMRITSAR	S-NPP	74.91953	31.73236	14:18:00	D	3.20
29	AMRITSAR	AMRITSAR	S-NPP	74.94997	31.73417	14:18:00	D	4.20
30	AMRITSAR	AMRITSAR	S-NPP	74.92065	31.73480	14:18:00	D	3.90

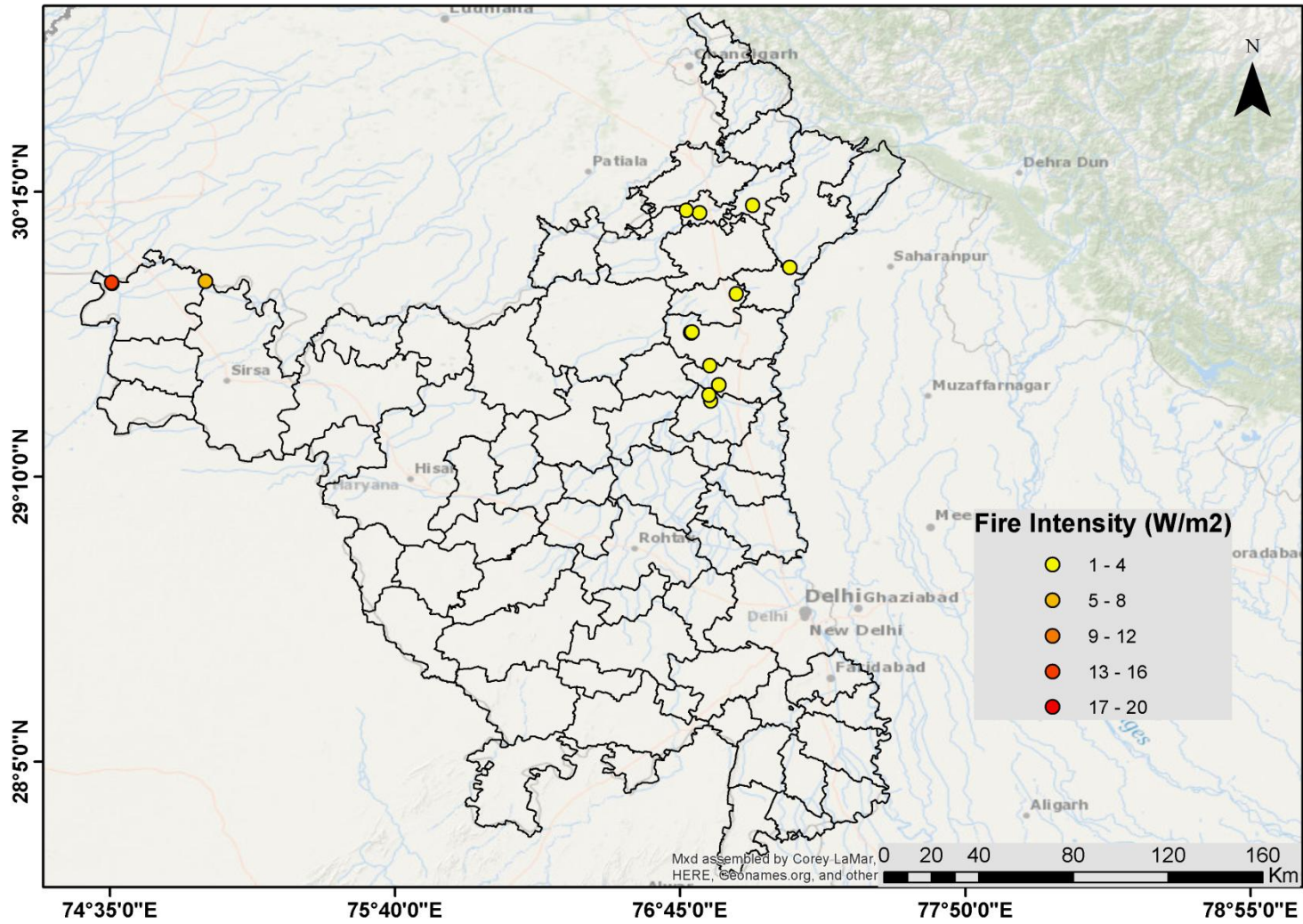
31	AMRITSAR	AMRITSAR	S-NPP	74.98985	31.76856	14:18:00	D	1.60
32	GURDASPUR	GURDASPUR	S-NPP	75.02695	31.81602	12:42:00	D	2.20

District-wise cumulative number of residue burning events in Punjab (30-Sep-2018 to 04-Oct-2018)



(b) Haryana

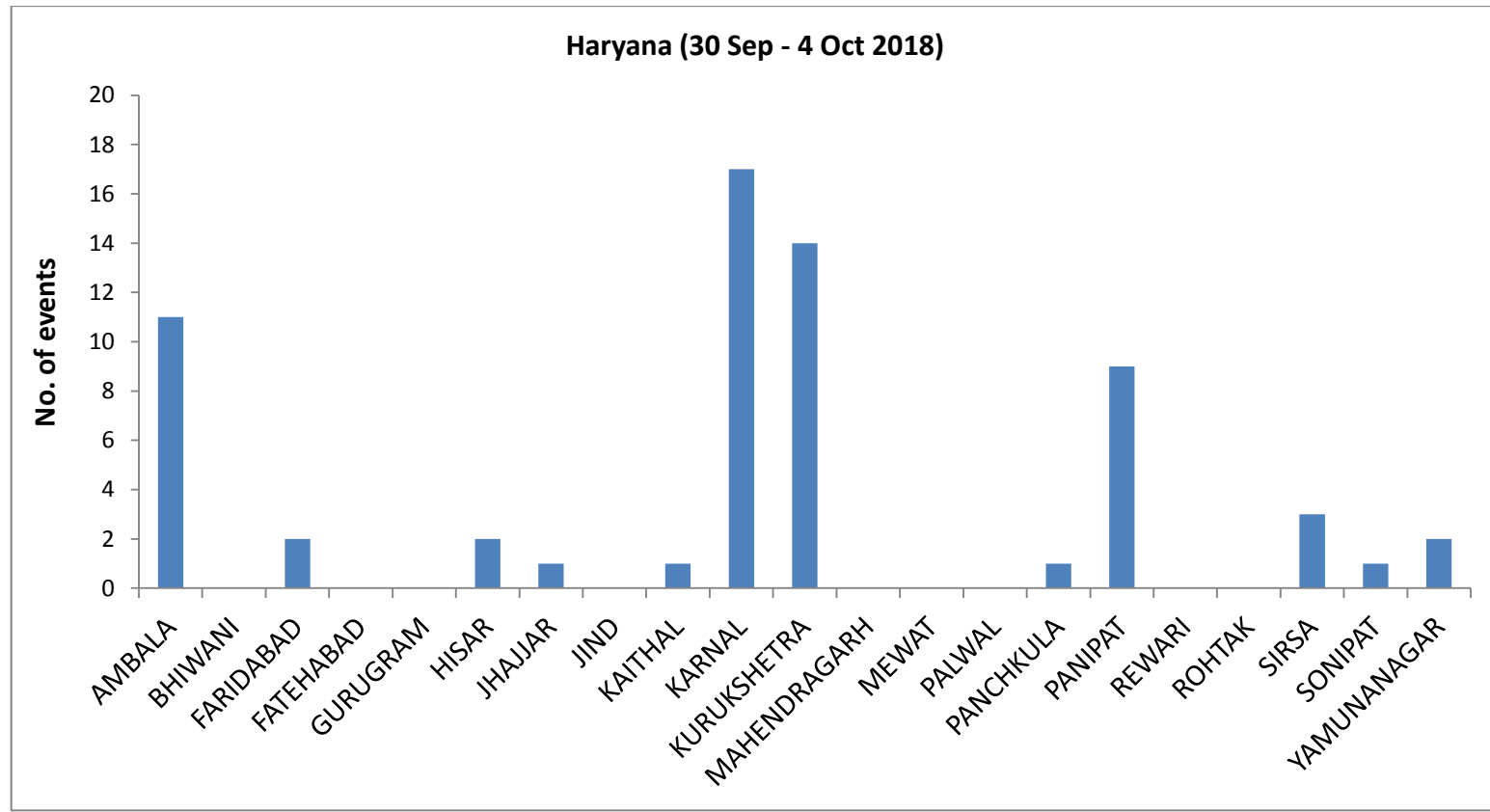
Paddy Residue Burning in Haryana on 4th Oct 2018



Details of residue burning events in Haryana on 04-Oct-2018

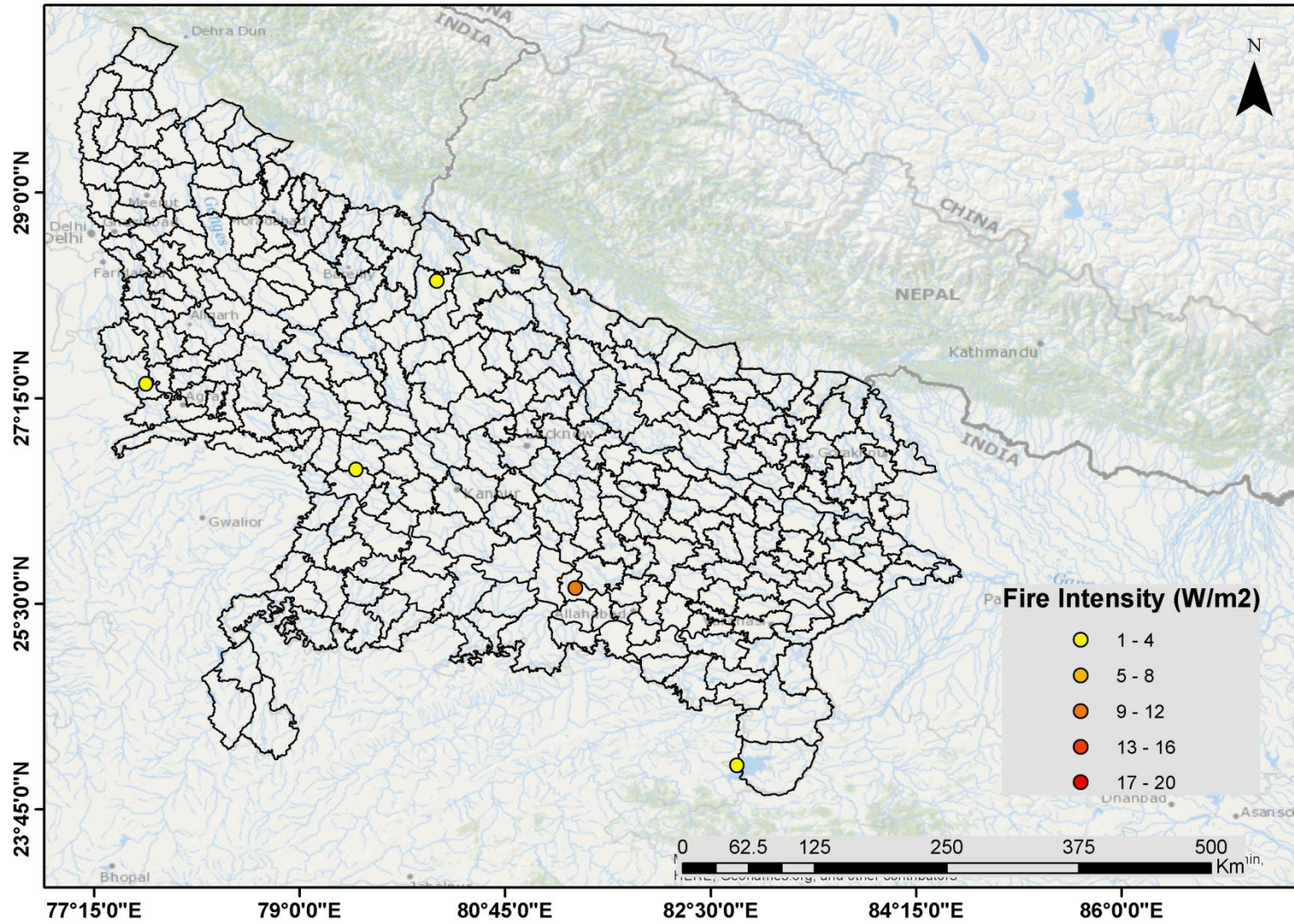
Events S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m²)
1	PANIPAT	PANIPAT	S-NPP	76.86548	29.45473	12:42:00	D	3.80
2	PANIPAT	PANIPAT	S-NPP	76.85995	29.47658	14:18:00	D	3.70
3	KARNAL	GHARAUNDA	S-NPP	76.89690	29.51595	12:42:00	D	3.00
4	KARNAL	GHARAUNDA	S-NPP	76.86298	29.58825	12:42:00	D	3.90
5	KARNAL	KARNAL	S-NPP	76.79162	29.71333	12:42:00	D	7.50
6	KARNAL	KARNAL	S-NPP	76.79002	29.71558	12:42:00	D	3.70
7	KARNAL	KARNAL	S-NPP	76.79433	29.71663	12:42:00	D	3.70
8	KARNAL	NILOKHERI	S-NPP	76.96340	29.86213	12:42:00	D	3.40
9	SIRSA	DABWALI	S-NPP	74.59090	29.90192	12:42:00	D	16.10
10	SIRSA	DABWALI	S-NPP	74.58984	29.90415	12:42:00	D	14.60
11	SIRSA	DABWALI	S-NPP	74.94571	29.90986	12:42:00	D	6.30
12	KARNAL	INDRI	S-NPP	77.16592	29.96284	12:42:00	D	1.80
13	KURUKSHETRA	SHAHABAD	S-NPP	76.82271	30.16875	14:18:00	D	2.60
14	KURUKSHETRA	SHAHABAD	AQUA-1	76.89817	30.17654	13:11:00	D	24.51
15	KURUKSHETRA	SHAHABAD	S-NPP	76.77380	30.17929	12:42:00	D	2.30
16	AMBALA	BARARA	S-NPP	77.02610	30.19779	14:18:00	D	2.30

District-wise cumulative number of residue burning events in Haryana (30-Sep-2018 to 04-Oct-2018)



(c) Uttar Pradesh

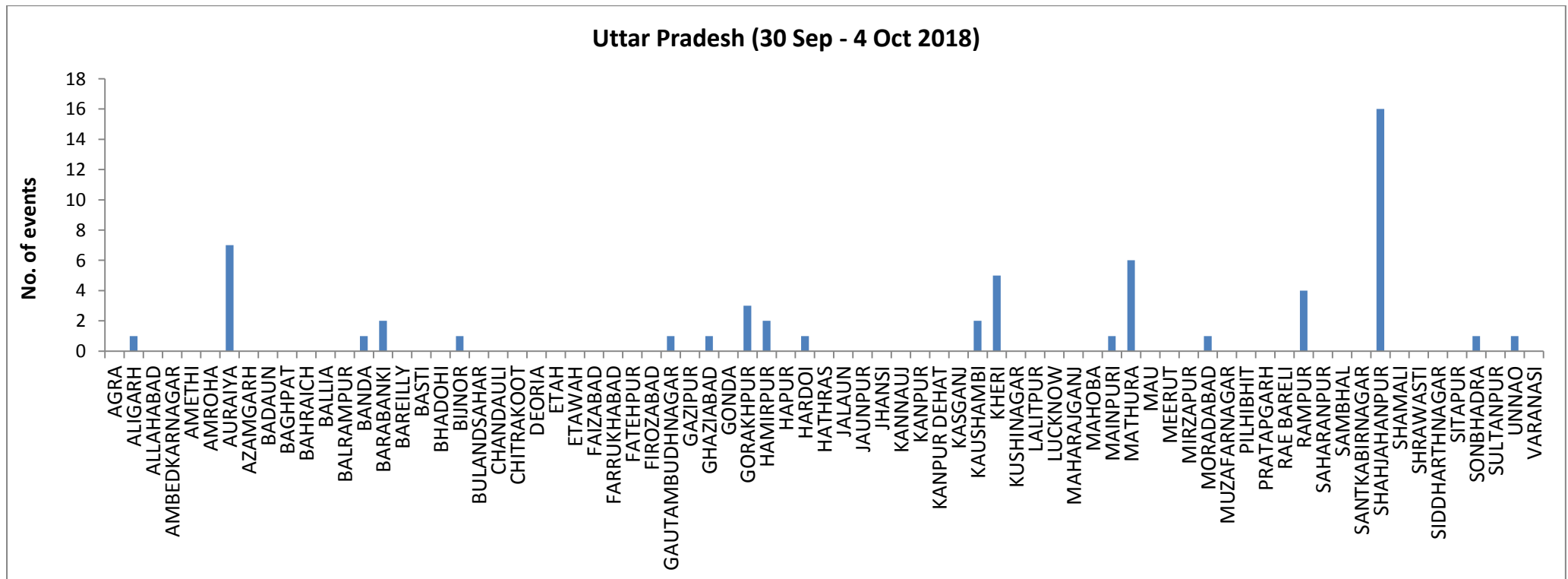
Paddy Residue Burning in Uttar Pradesh on 4th Oct 2018



Details of residue burning events in Uttar Pradesh on 04-Oct-2018

Events S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	SONBHADRA	DUDHI	S-NPP	82.72269	24.12605	01:24:00	N	1.20
2	KAUSHAMBI	SIRATHU	S-NPP	81.34709	25.63411	12:36:00	D	9.60
3	AURAIYA	BIDHUNA	S-NPP	79.47981	26.64276	01:24:00	N	1.40
4	MATHURA	MATHURA	S-NPP	77.68993	27.37397	12:36:00	D	4.00
5	SHAHJAHANPUR	PUWANYA	S-NPP	80.16628	28.24861	12:36:00	D	3.50

District-wise cumulative number of residue burning events in Uttar Pradesh (30-Sep-2018 to 04-Oct-2018)



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

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GIS Maps of fire events can be visualized online on ICAR KRISHI Geoportal website:

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