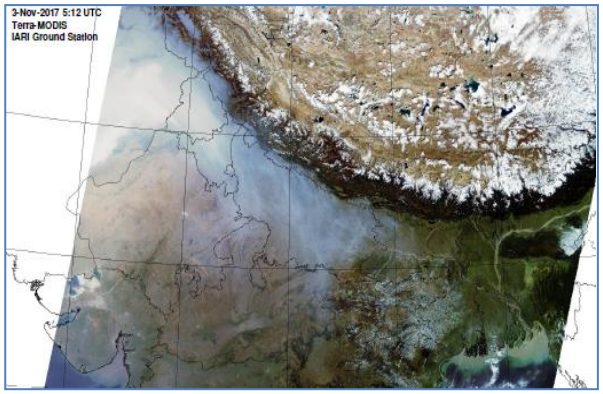
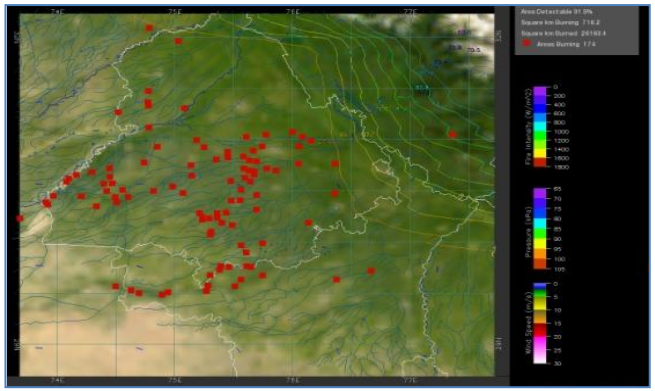
MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2019





Bulletin No. 1

Events Date: 01-Oct-2019

Issued on: 02-Oct-2019

Prepared by:

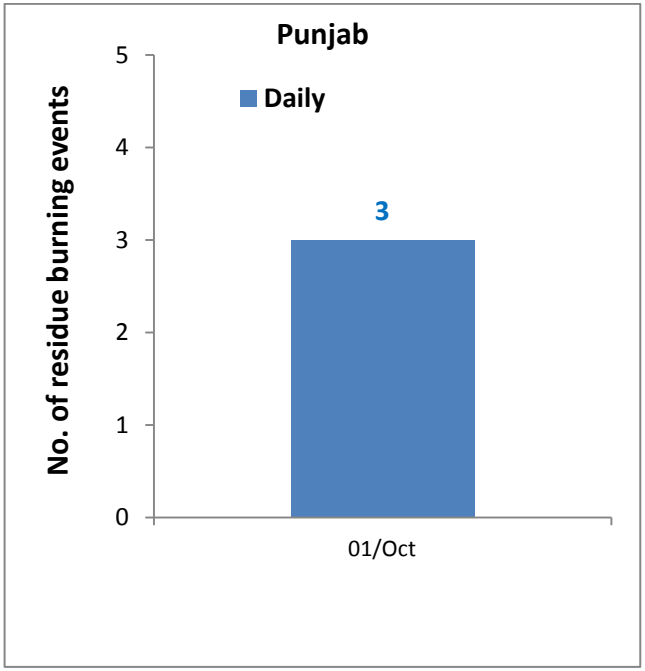
Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory, Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012

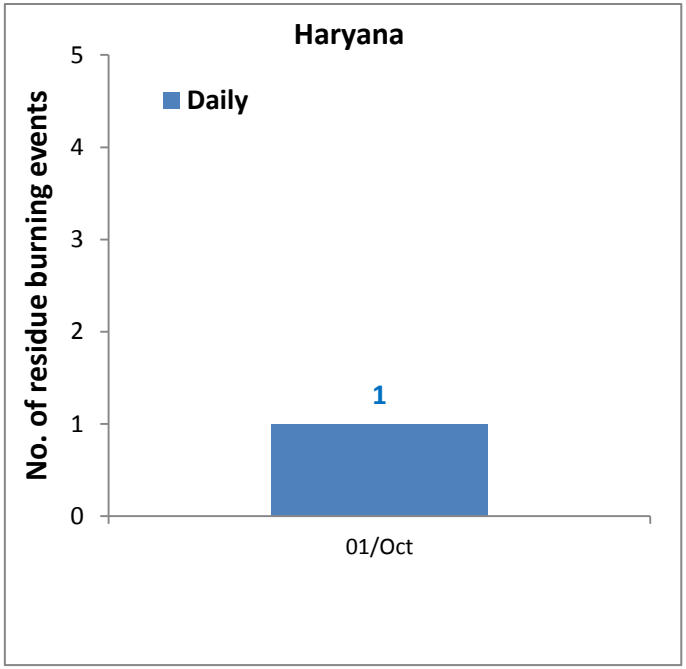
http://creams.iari.res.in

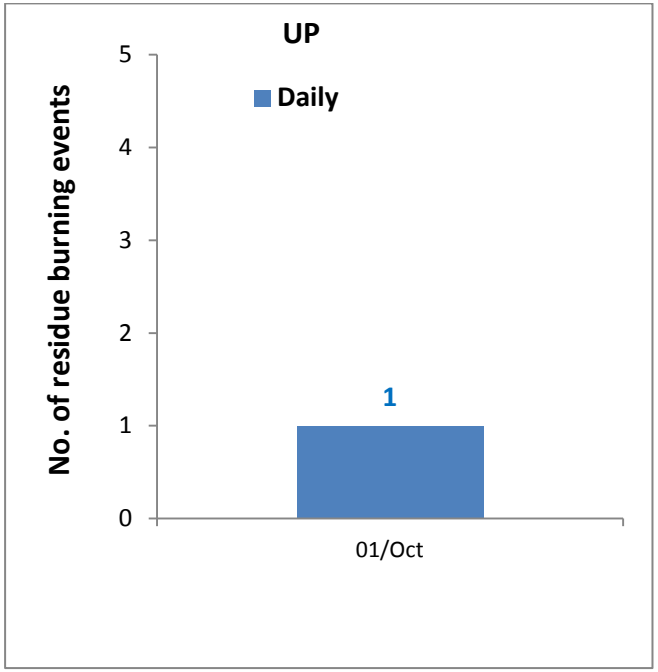
Highlights for 01-October-2019

- **Satellites detected 05 residue burning events in the three study States on 01-Oct-2019.**
- **In Punjab, burning/fire events were concentrated in Amritsar district.**
- **In Haryana and Uttar Pradesh, the burning/fire events were scattered.**
- **The number of burning events was lowest on 1-Oct in the three states in last four years.**
- **Overall, the residue burning/fire events are very few on the date in the three study States being monitored.**

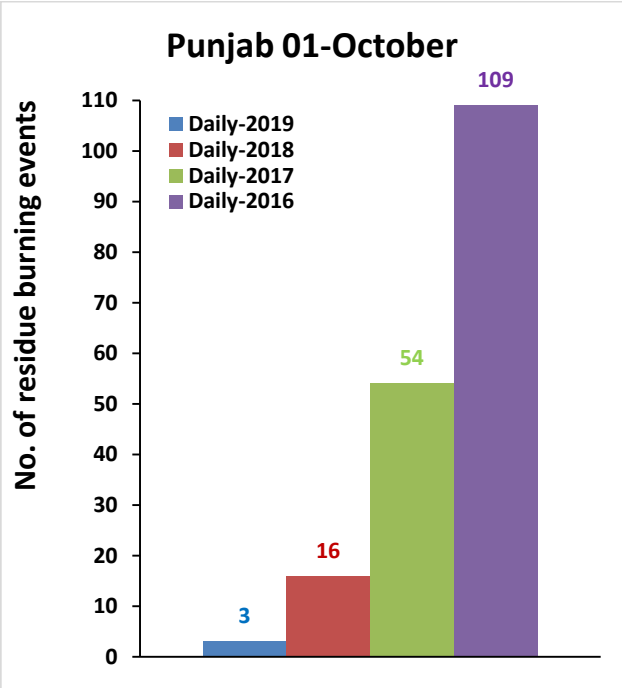
Temporal distribution of residue burning events for the three study States

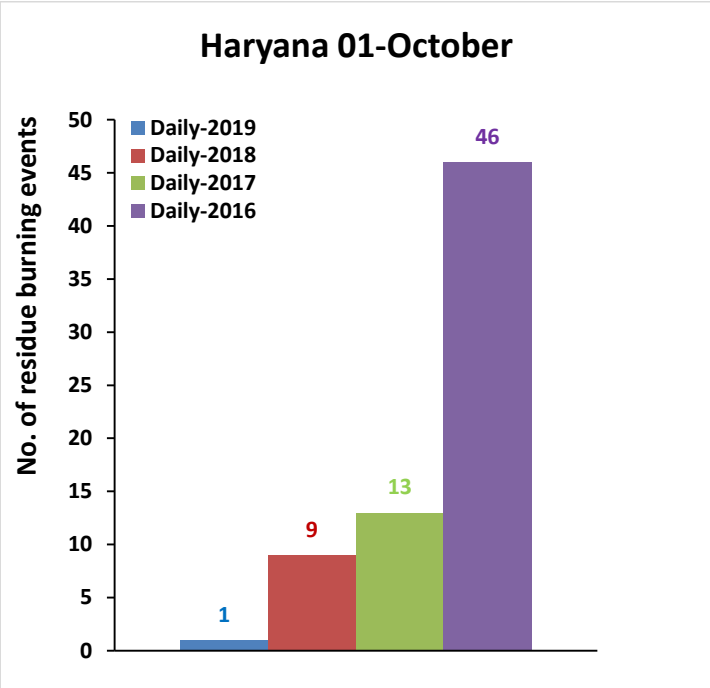


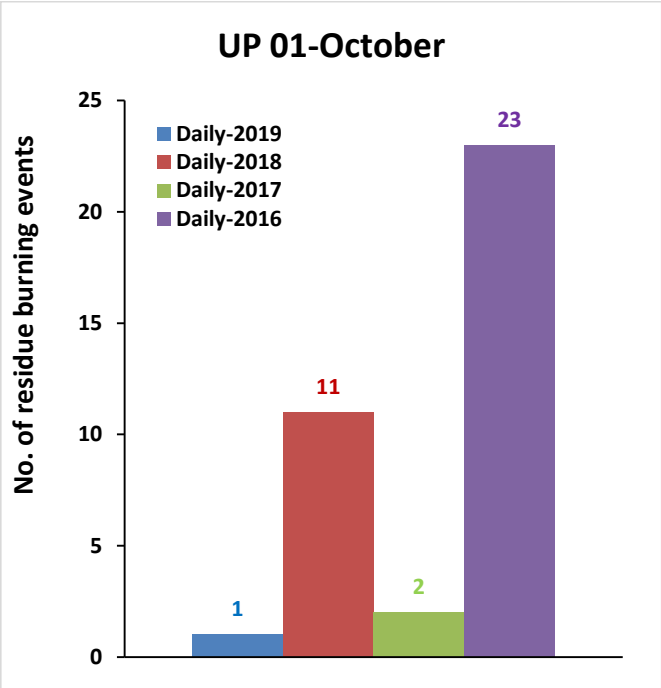




Comparison of residue burning events in current year (2019) with previous years in the three study States (01-Oct-2019 to 01-Oct-2019)

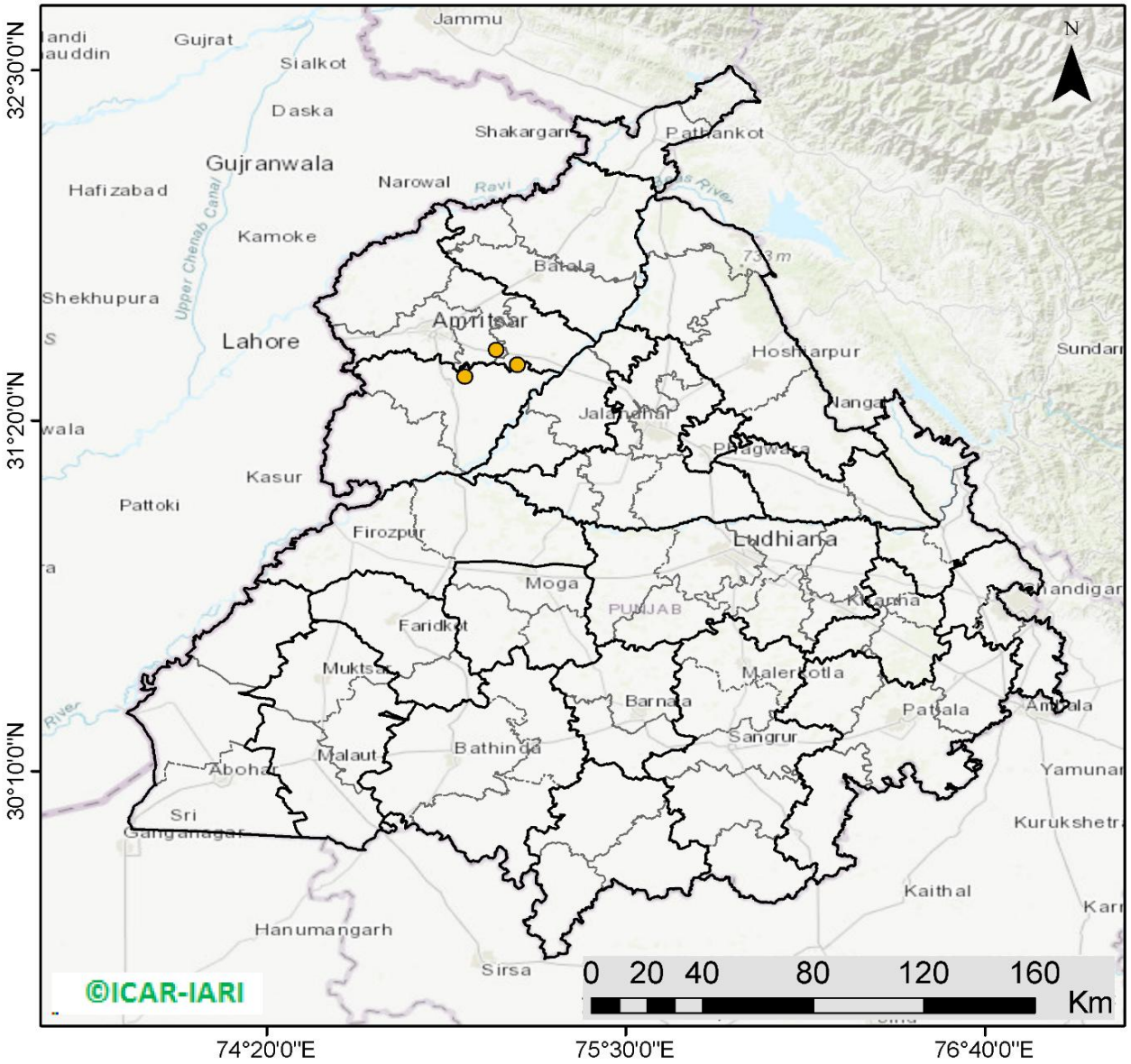






Punjab

RICE RESIDUE BURNING IN PUNJAB



03 burning events detected in Punjab on **01st October 2019**

Fire Intensity (W/m2)

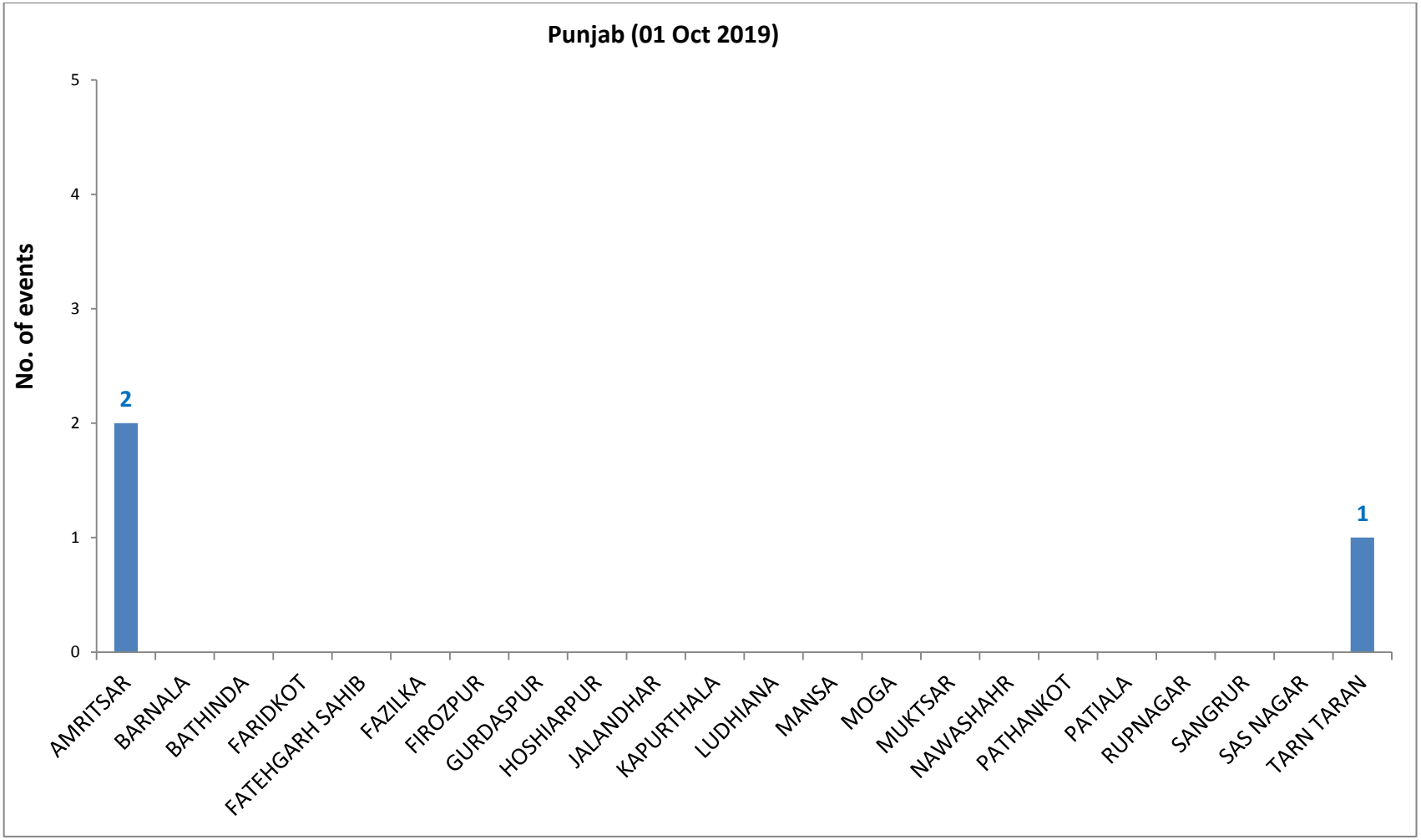
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20

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

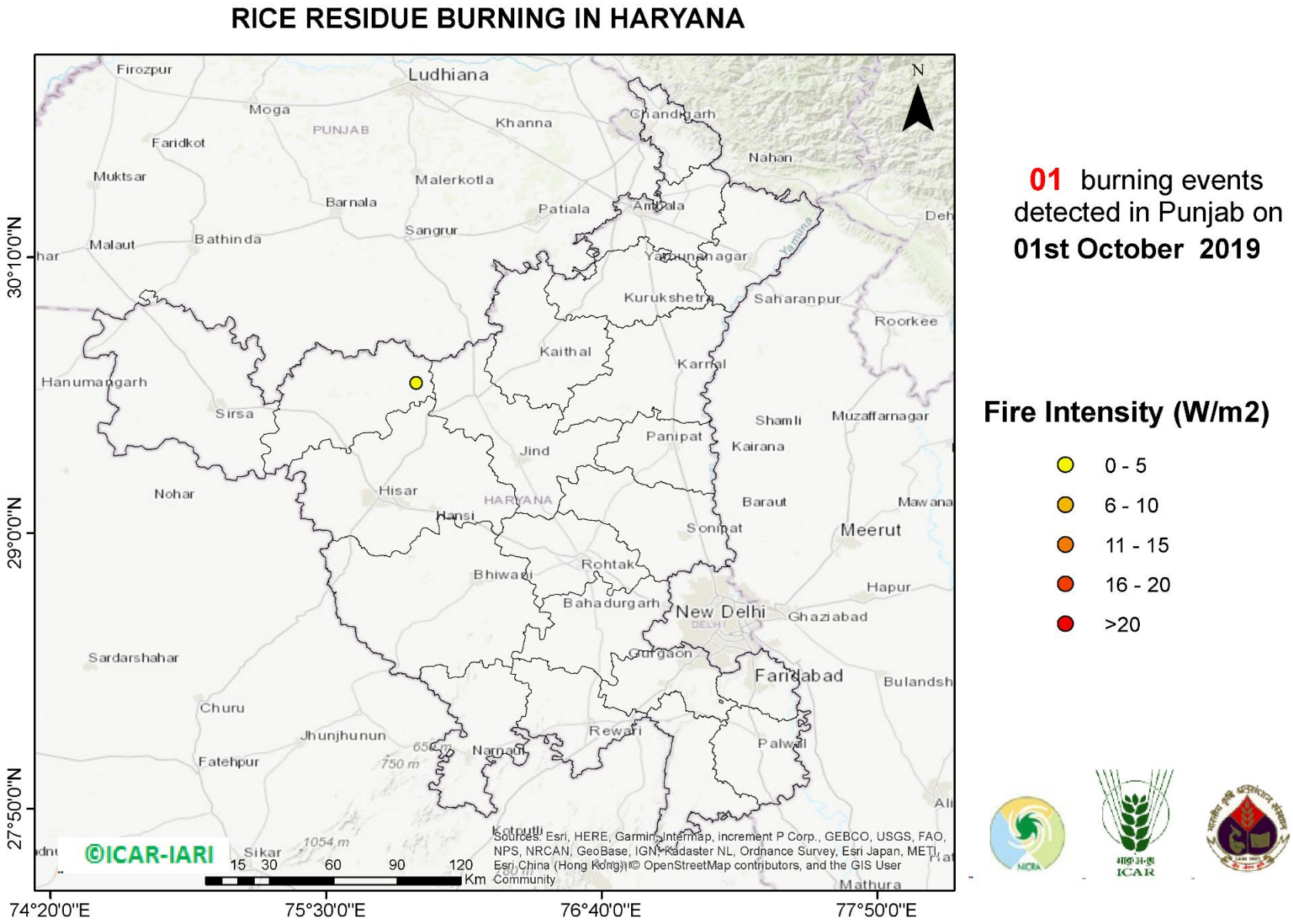
Details of residue burning events in Punjab on 01-Oct-2018

S. No.	District	Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	TARN TARAN	KHADOOR SAHIB	AQUA	74.97700	31.47900	13:50:00	D	7.60
2	AMRITSAR	BABA BAKALA	AQUA	75.14800	31.51900	13:50:00	D	8.20
3	AMRITSAR	AMRITSAR I	AQUA	75.08000	31.56900	13:50:00	D	6.90

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



(b) Haryana



01 burning events detected in Punjab on **01st October 2019**

Fire Intensity (W/m2)

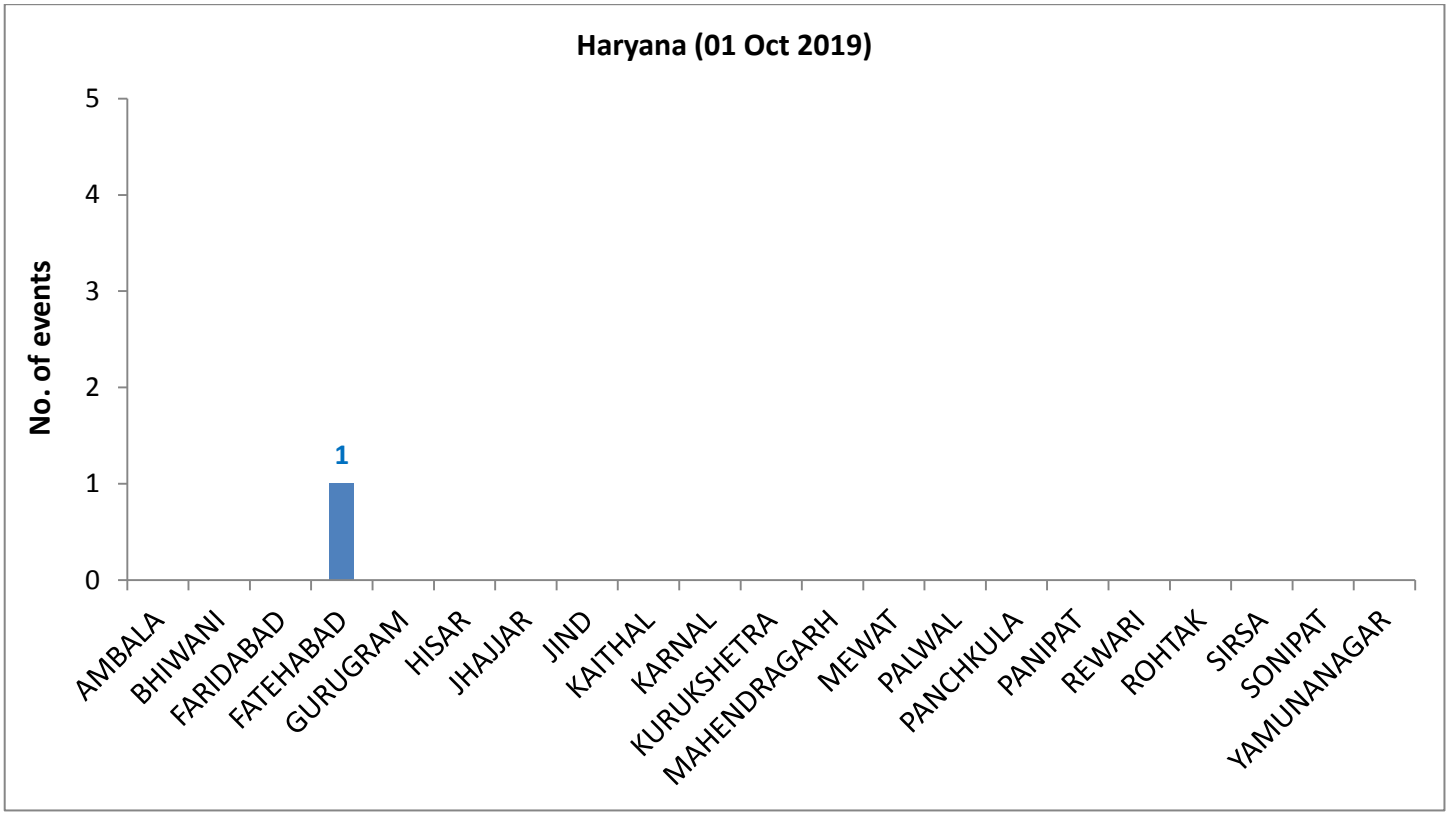
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20

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

Details of residue burning events in Haryana on 01-Oct-2019

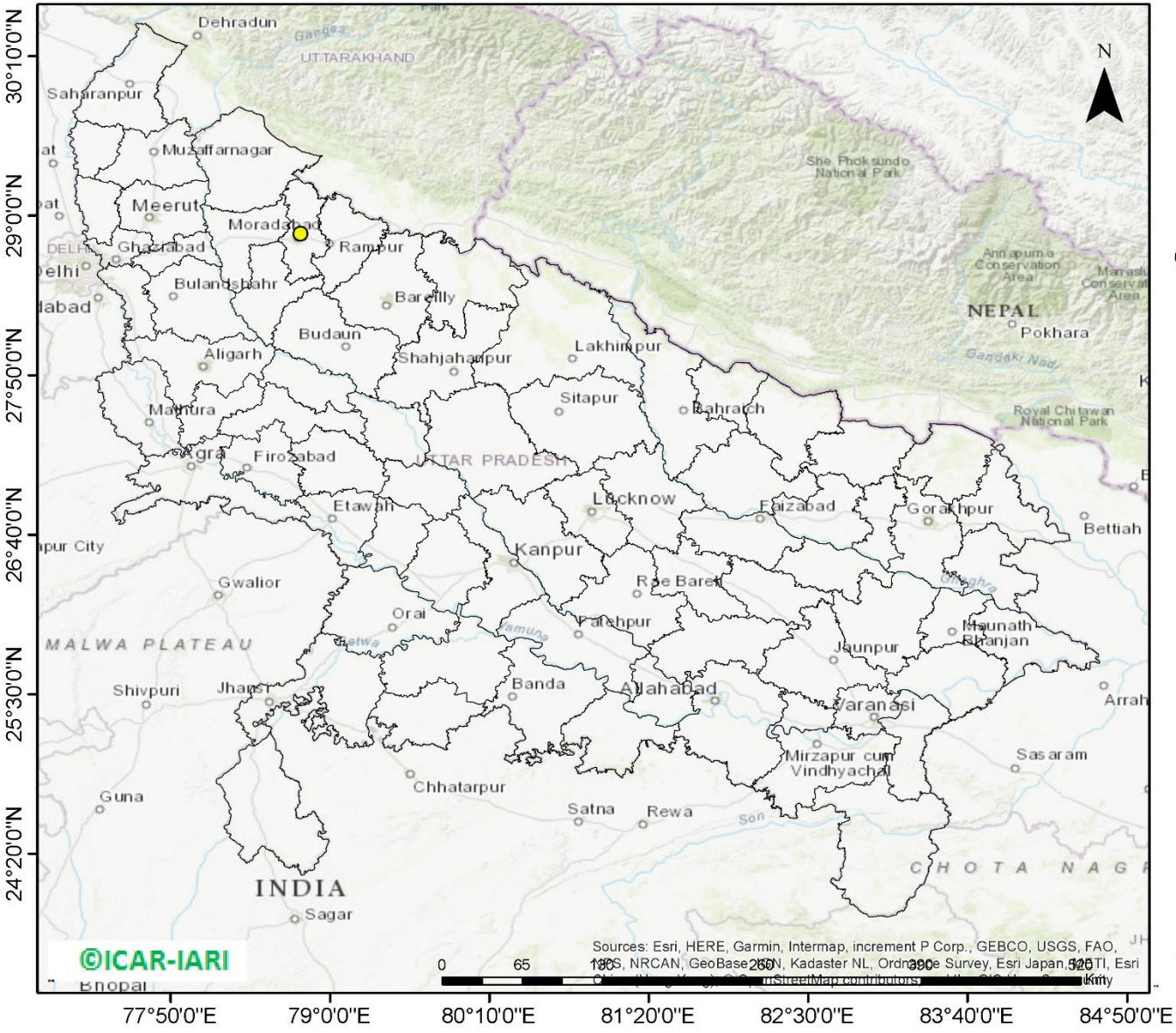
S. No.	District	Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	FATEHABAD	TOHANA	S-NPP	75.8817	29.6351	12:54:00	D	2.90

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



(c) Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



01 burning events detected in Uttar Pradesh on **01st October 2019**

Fire Intensity (W/m2)

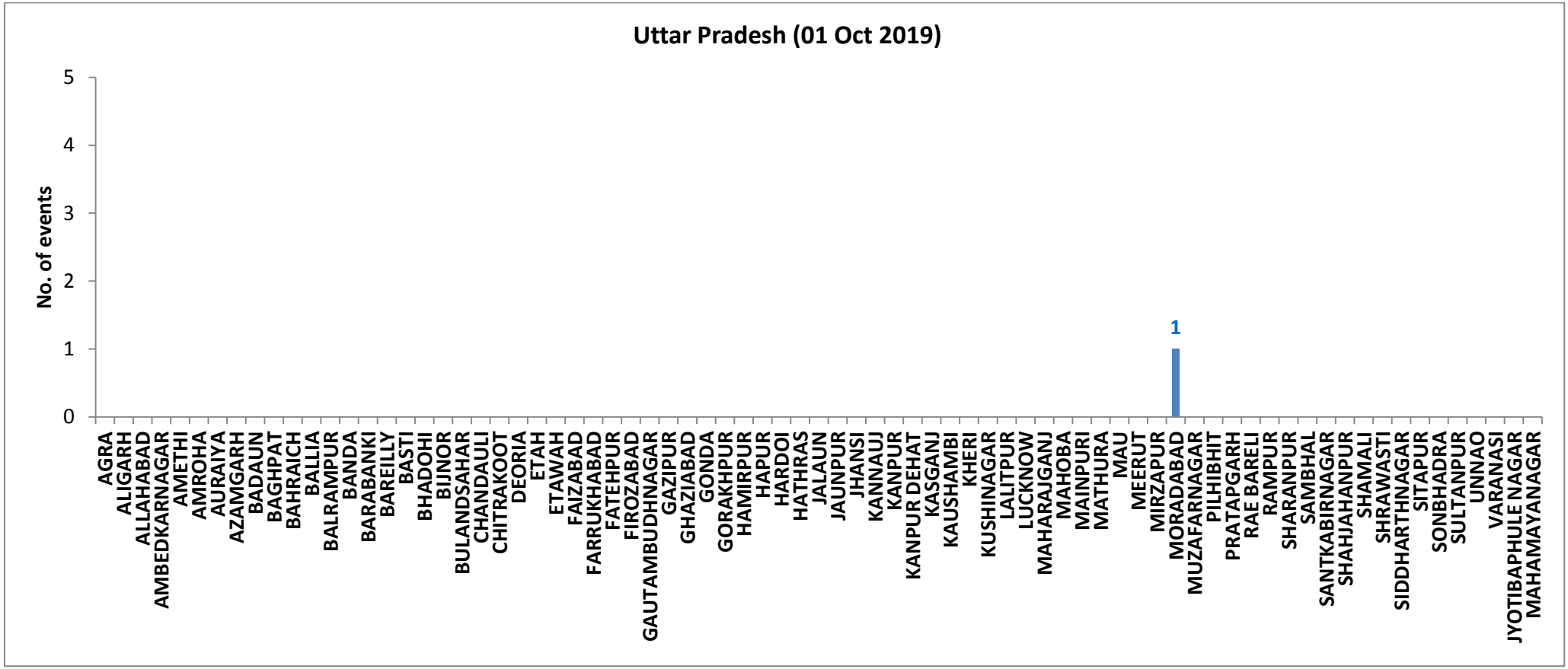
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20

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

Details of residue burning events in Uttar Pradesh on 01-Oct-2019

S. No.	District	Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	MORADABAD	MORADABAD	S-NPP	78.7845	28.8677	01:36:00	N	0.80

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



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

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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/

(Part of KRISHI Portal: https://krishi.icar.gov.in initiative)

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