

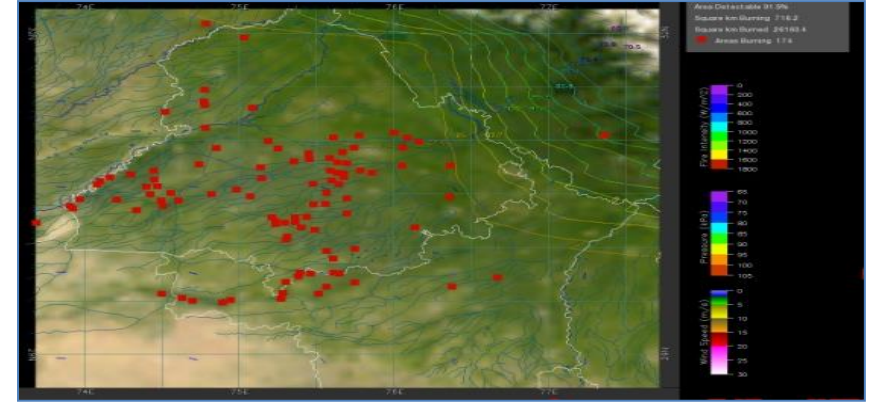
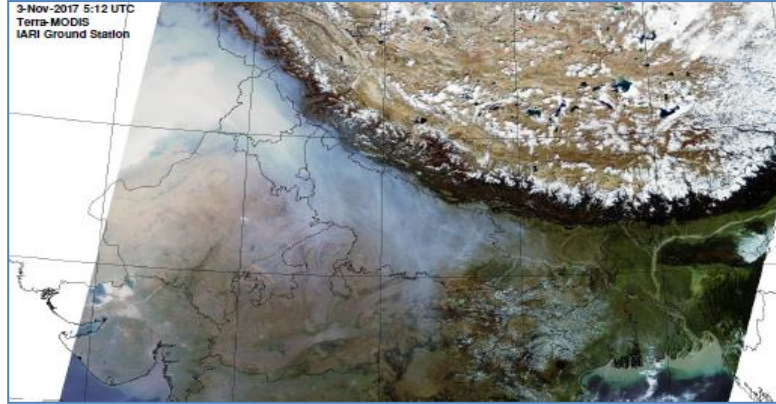


MONITORING PADDY RESIDUE BURNING IN INDIA USING SATELLITE REMOTE SENSING DURING 2025

Bulletin
No. 05

Events Date:
19-Sep-2025

Issued on:
19-Sep-2025



Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS)
Laboratory,

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

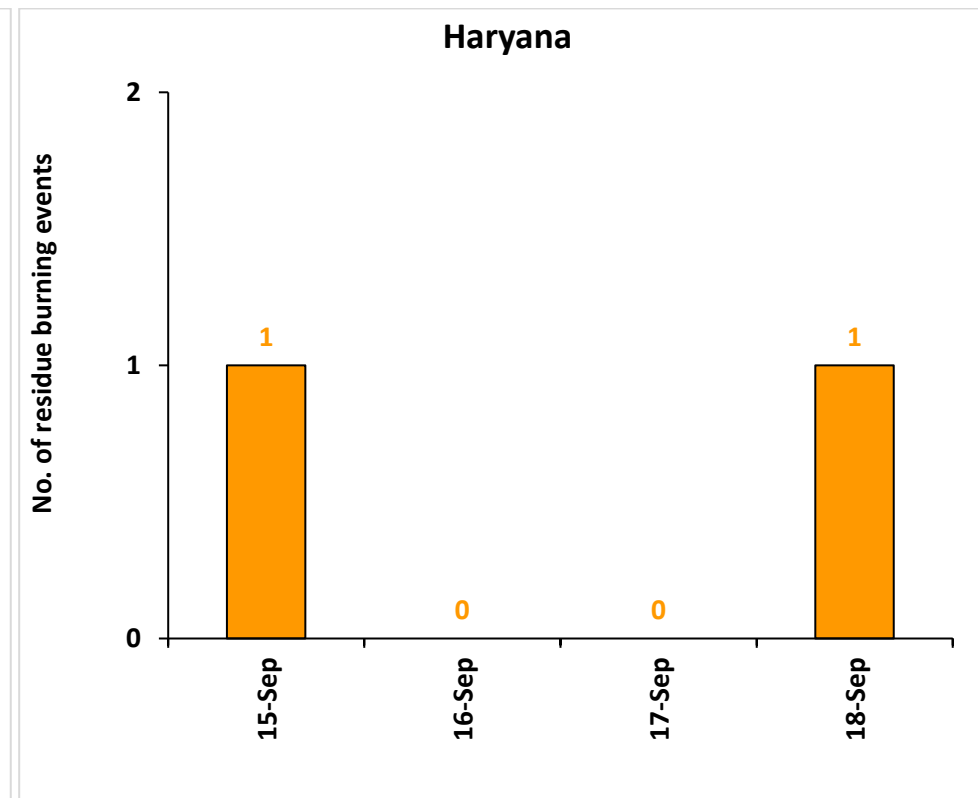
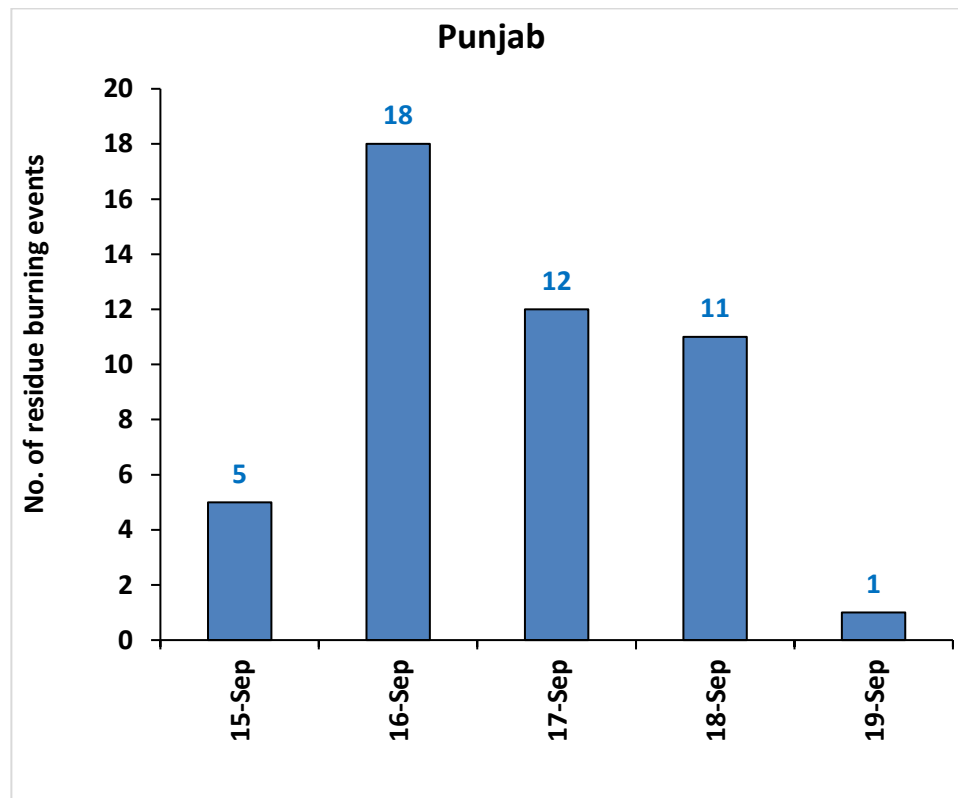
<http://creams.iari.res.in>



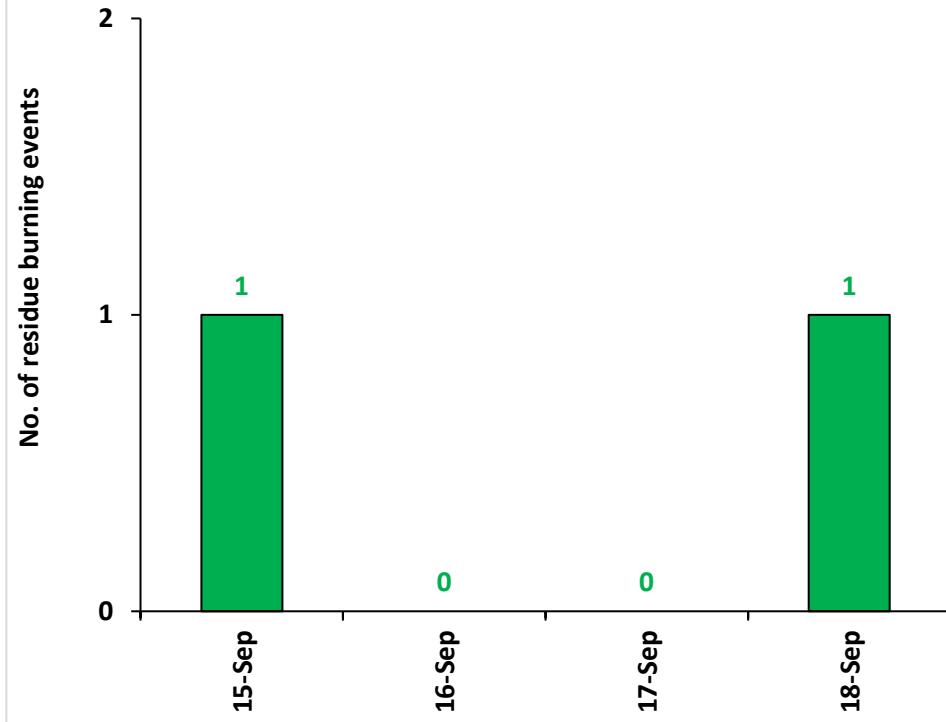
Highlights for 19-Sep-2025

- The active fire events due to rice residue burning were monitored using satellite remote sensing, following the "Standard Protocol for Estimation of Crop Residue Burning Fire Events using Satellite Data".
- Satellites detected **03** residue burning events in the six study States on **19-Sep-2025**.
- The state wise events detected on **19-Sep-2025** were **01** in Punjab, **01** in Haryana, **01** in UP, **00** in Delhi, **00** in Rajasthan and **00** in MP.
- Detection of residue burning events was hampered by the presence of clouds over Uttar Pradesh and Madhya Pradesh states.

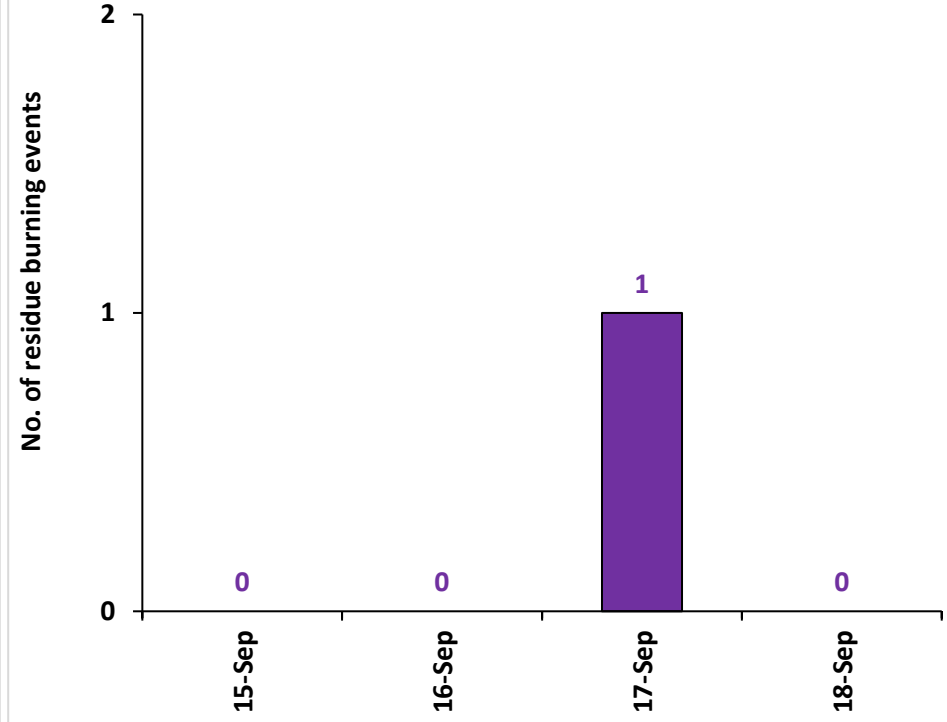
Temporal distribution of rice residue burning events for the study States in 2025



Uttar Pradesh

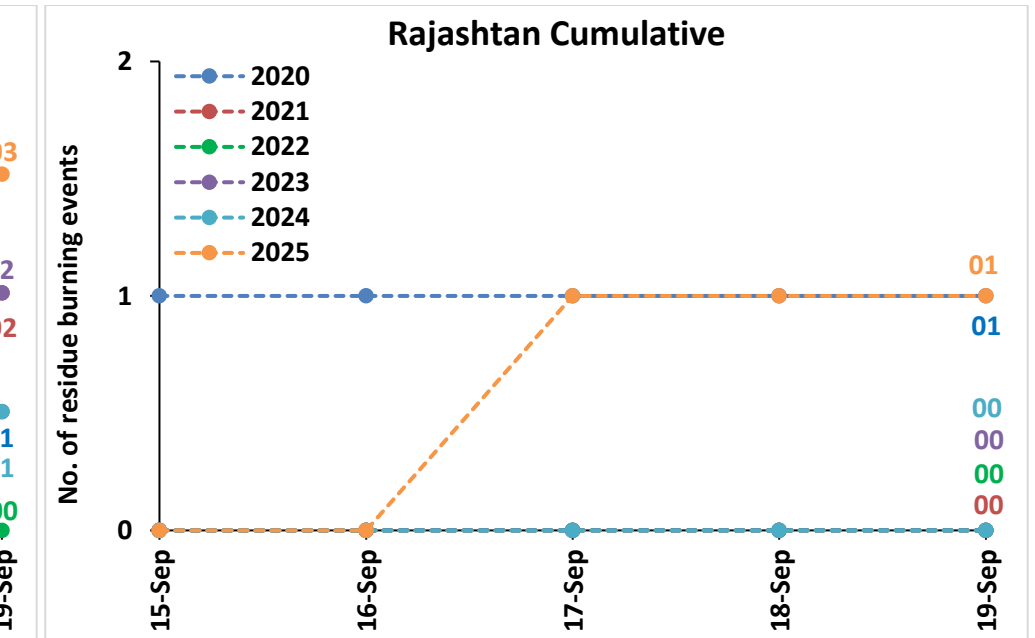
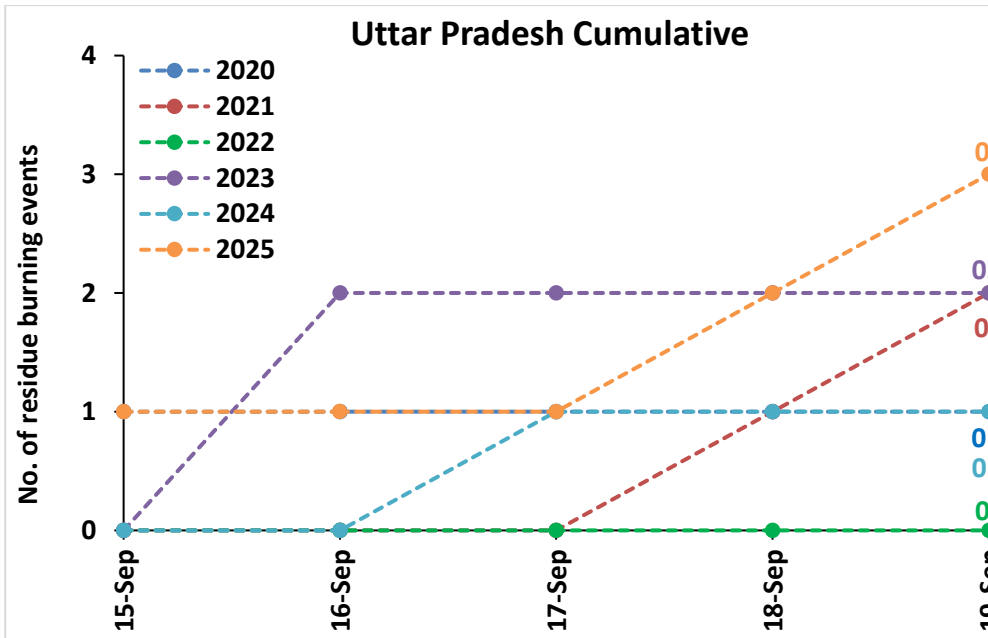
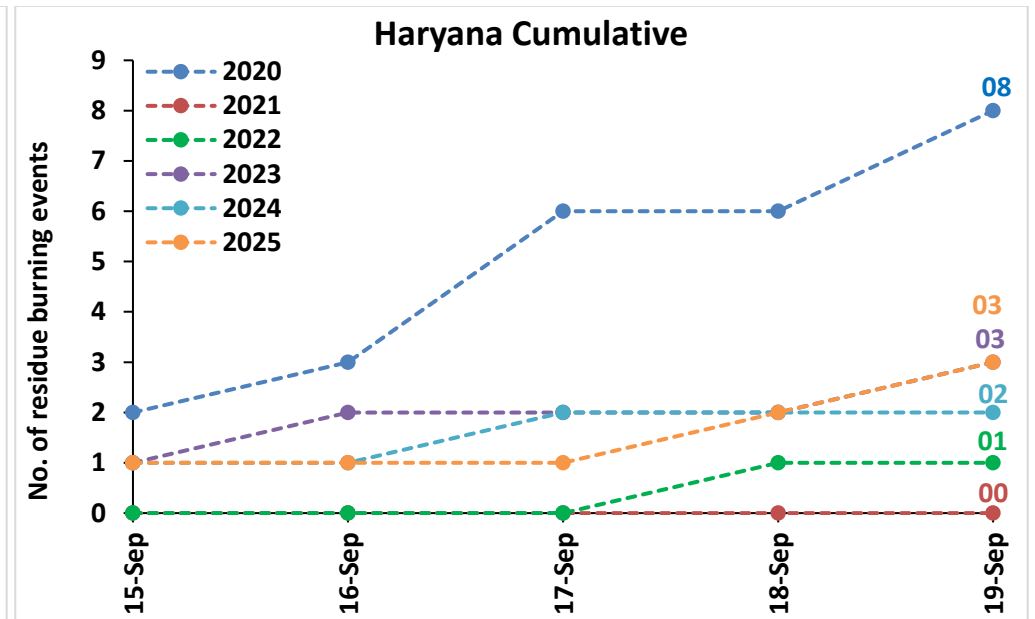
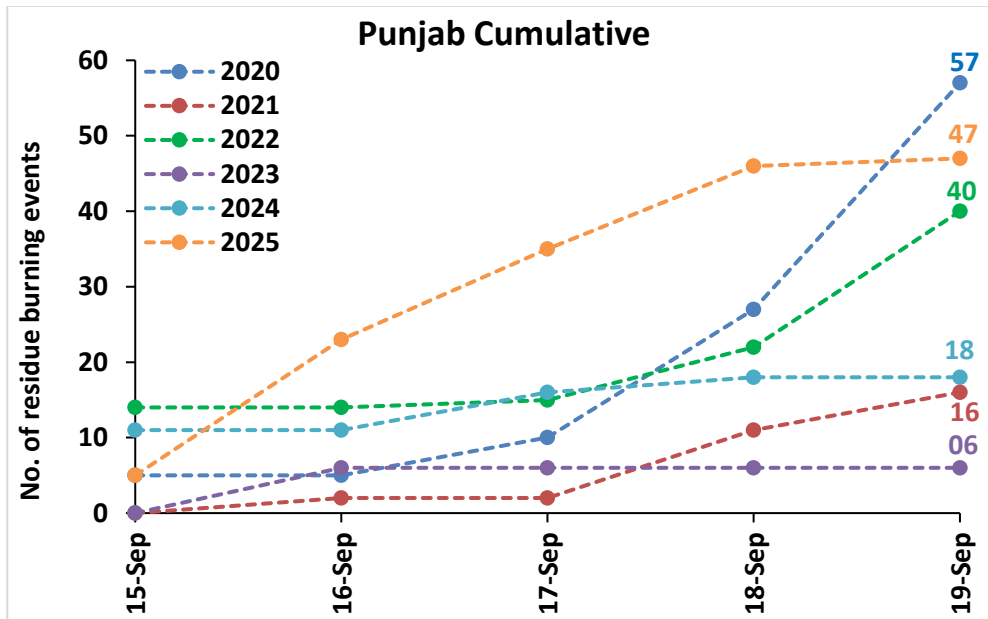


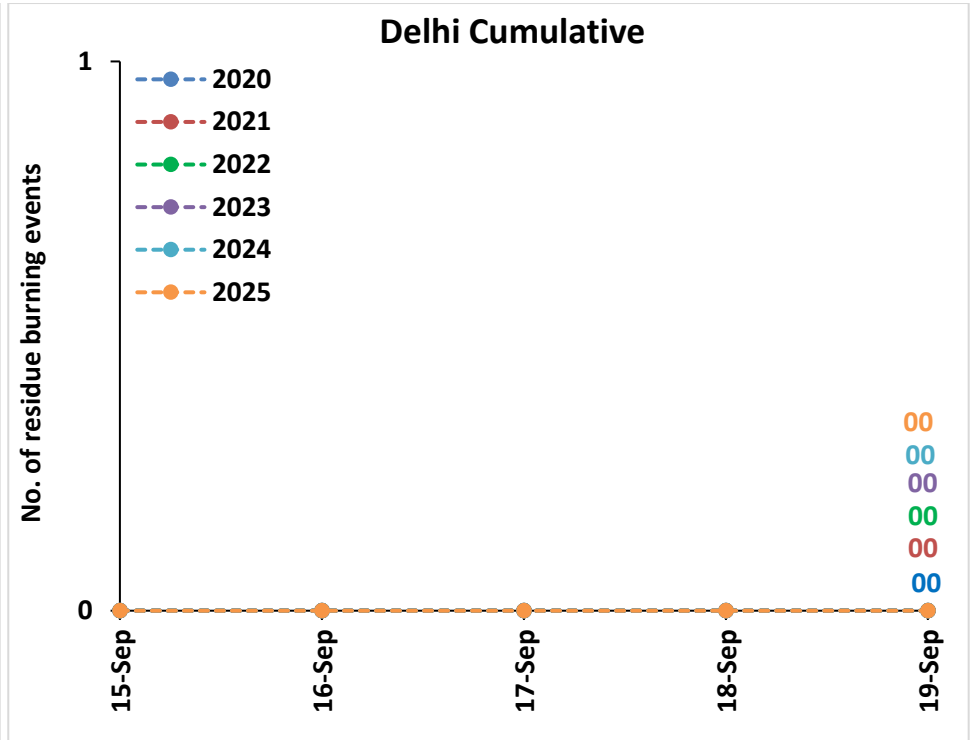
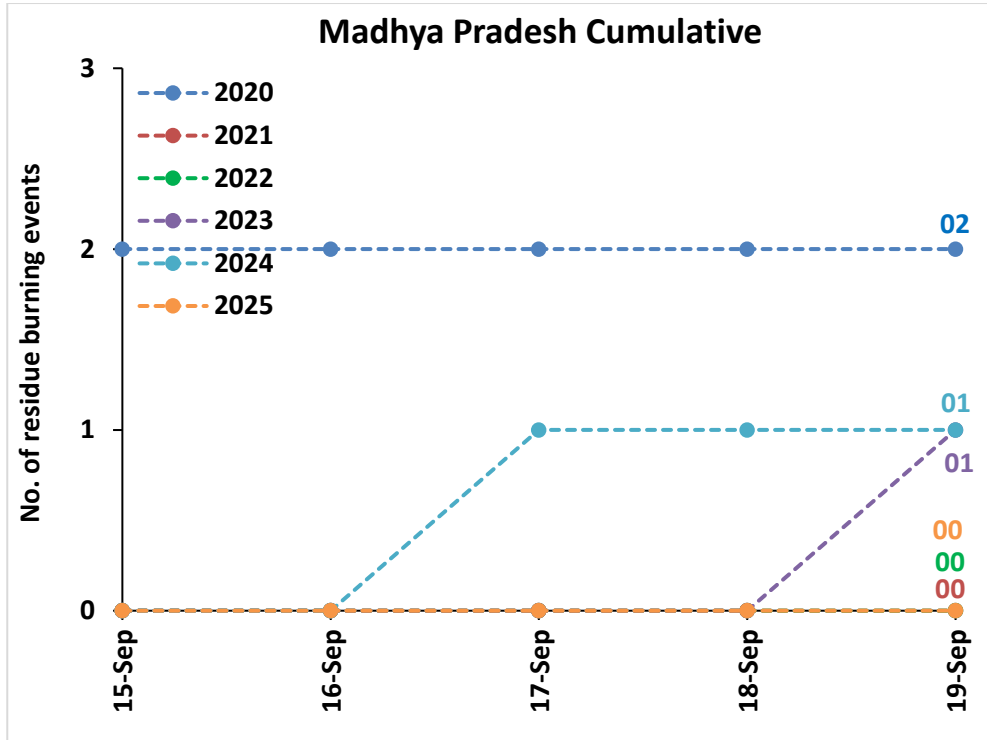
Rajasthan



Comparison of residue burning fire power in current year (2025) with previous years (2020,2021,2022, 2023 and 2024) for the study

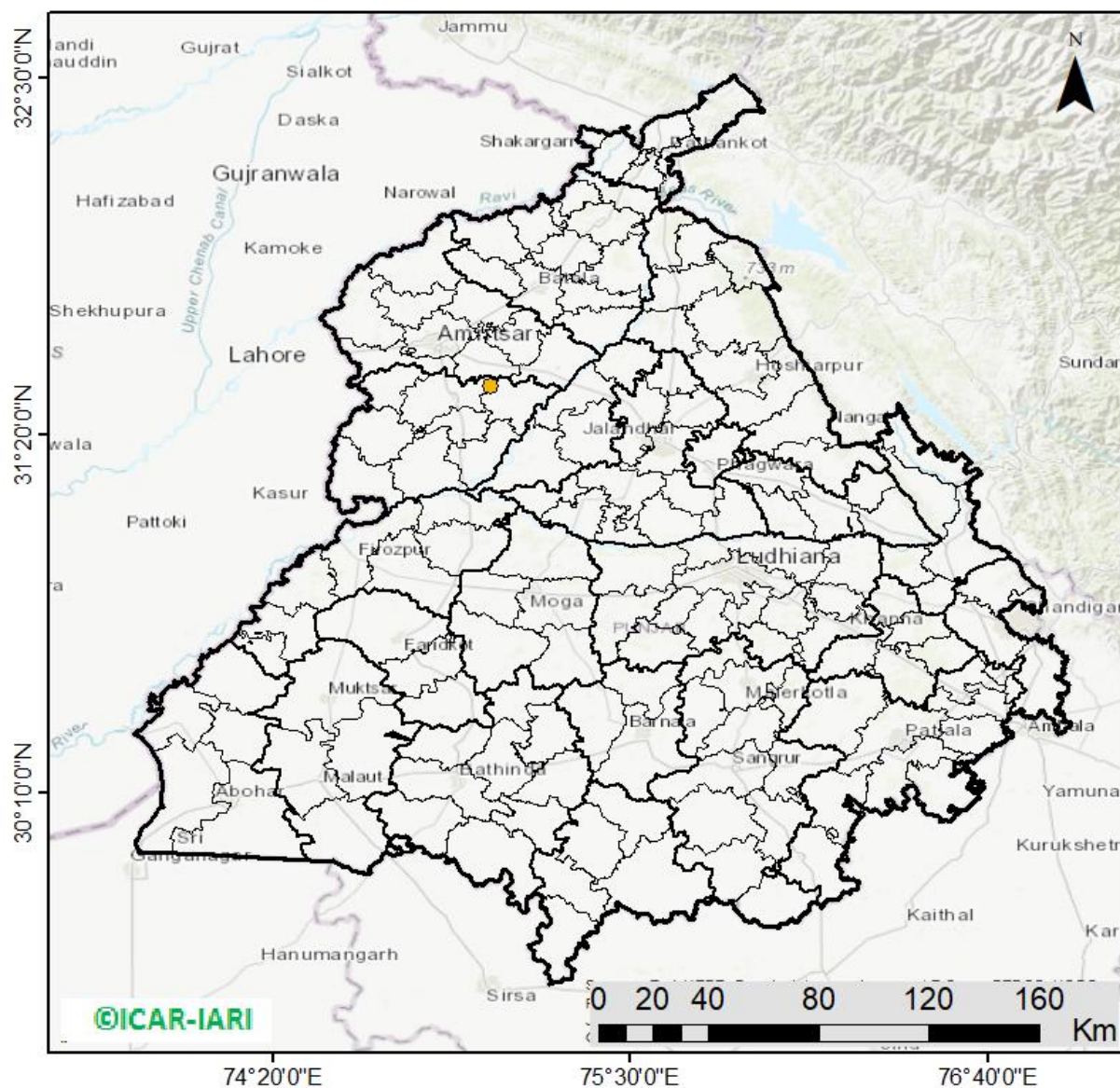
States





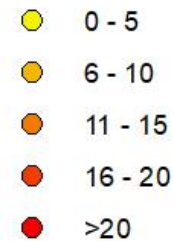
Punjab

RICE RESIDUE BURNING IN PUNJAB

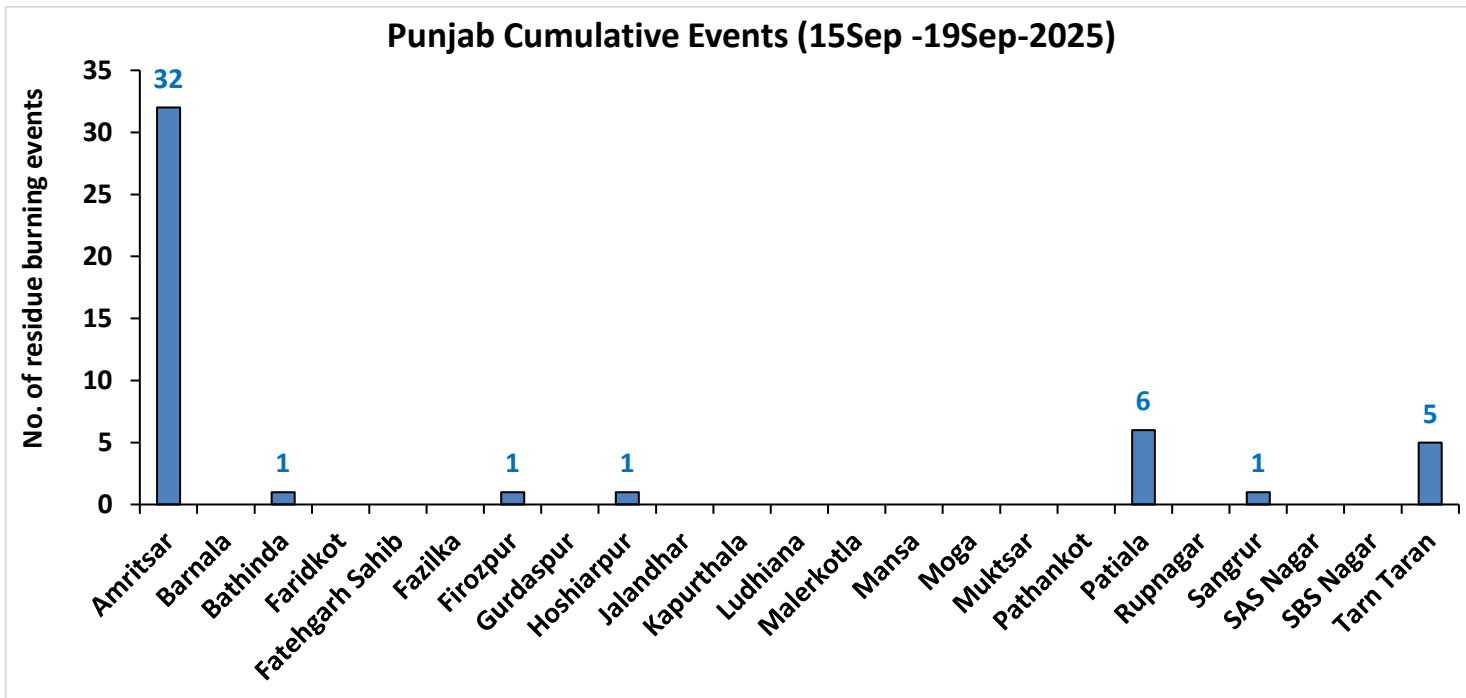
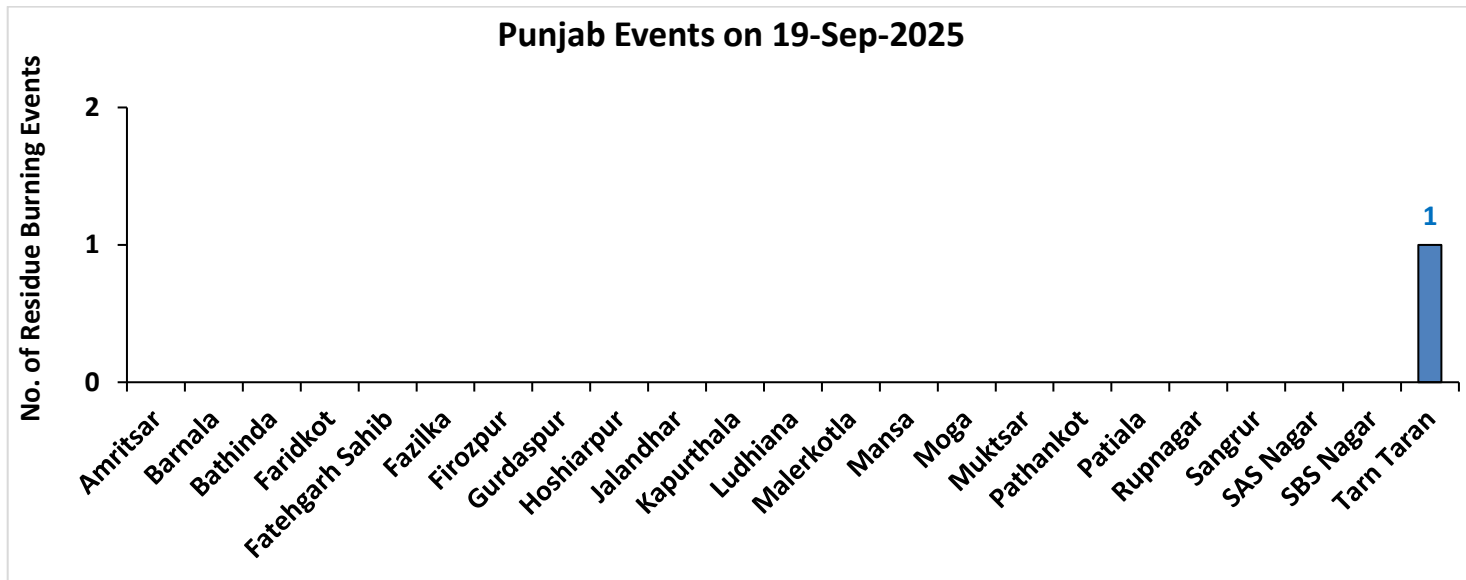


01 burning events
detected in Punjab during
(19th Sep 2025)

Fire Intensity (W/m²)

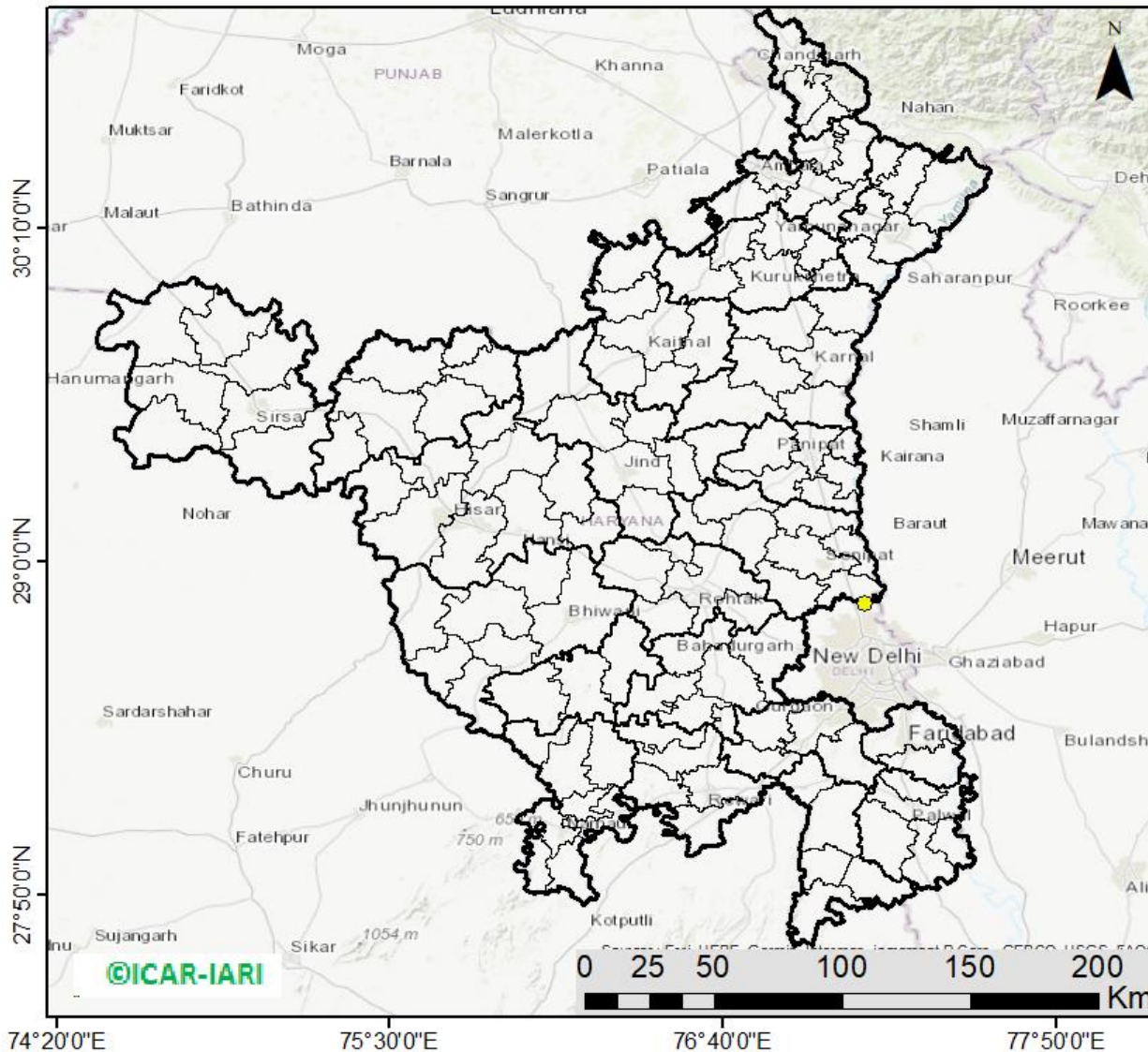


District-wise cumulative number of residues burning events (15Sep-19 Sep-2025)



Haryana

RICE RESIDUE BURNING IN HARYANA



01 burning events
detected in Haryana on
(19th Sep 2025)

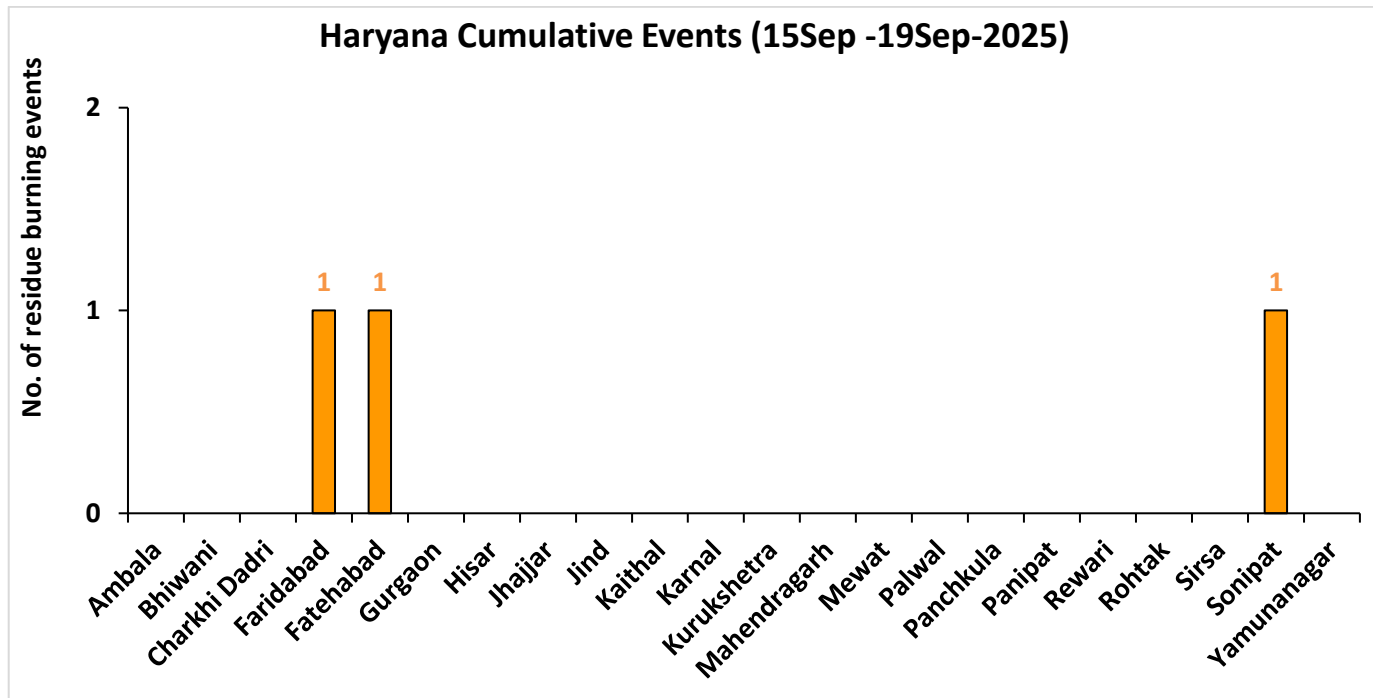
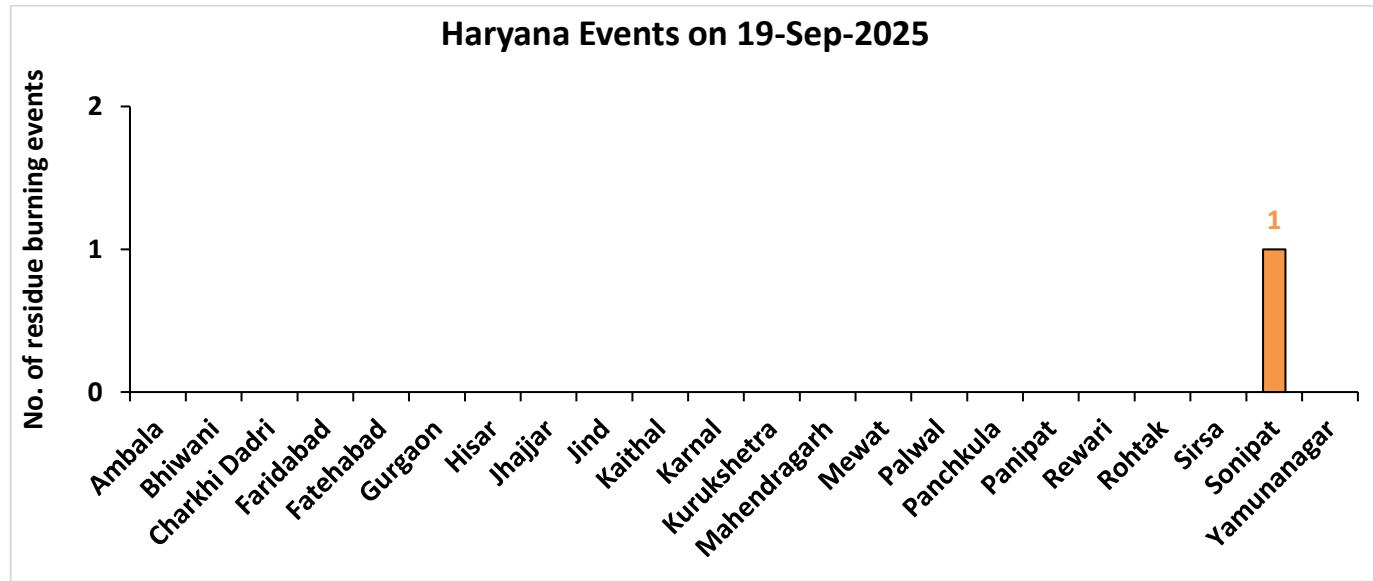
Fire Intensity (W/m²)

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



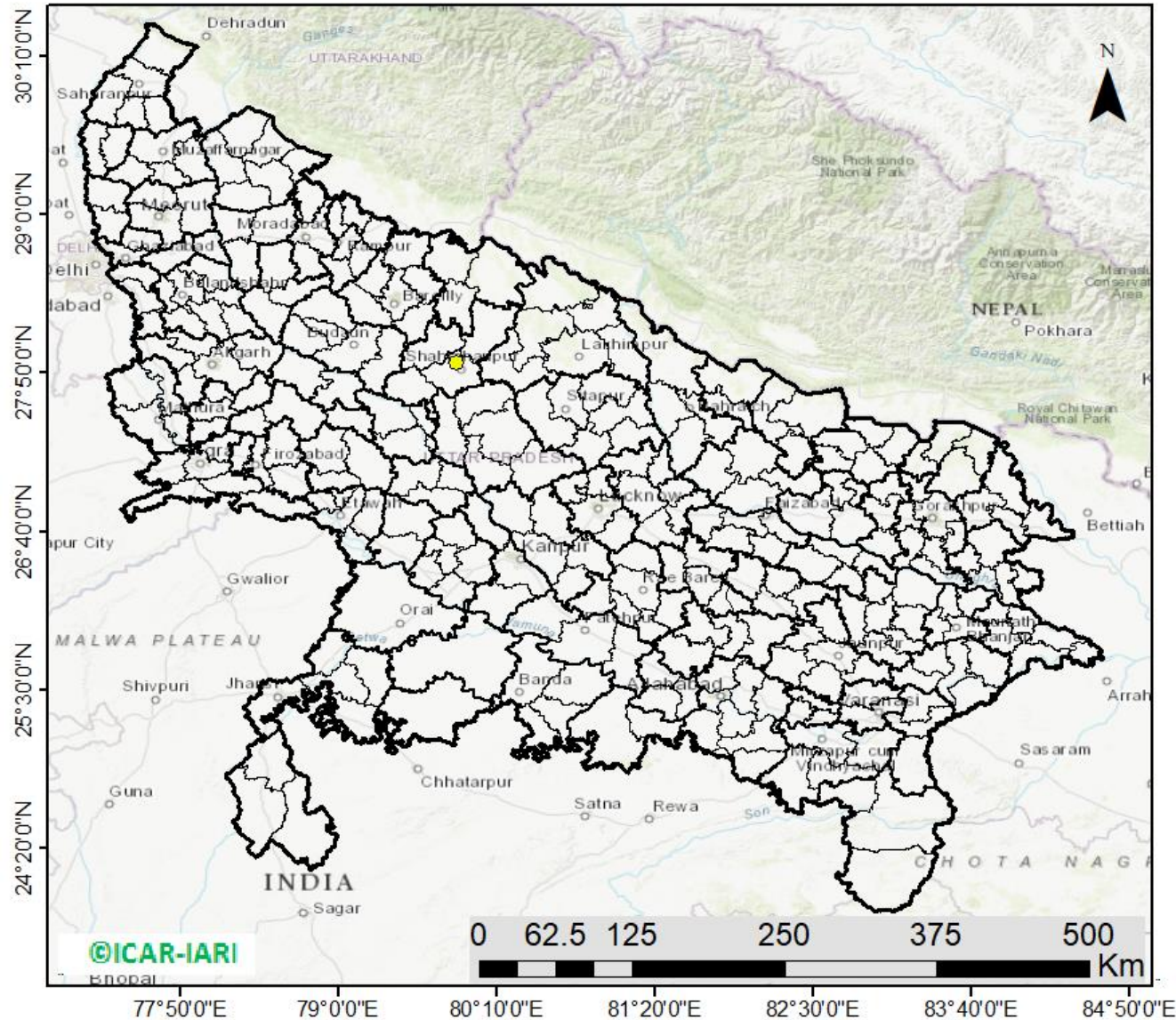
http://103.111.37.126/icar_geoportal/

District-wise cumulative number of residues burning events (15Sep-19 Sep-2025)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



01 burning events detected in Uttar Pradesh on (19th Sep 2025)

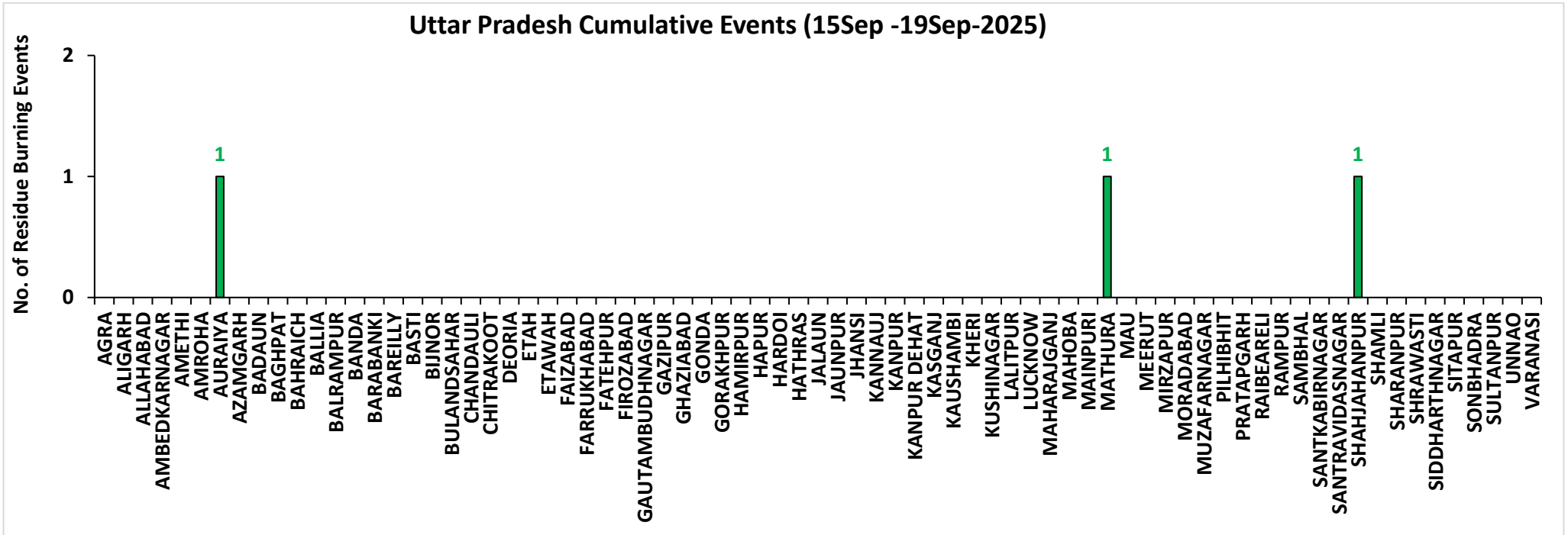
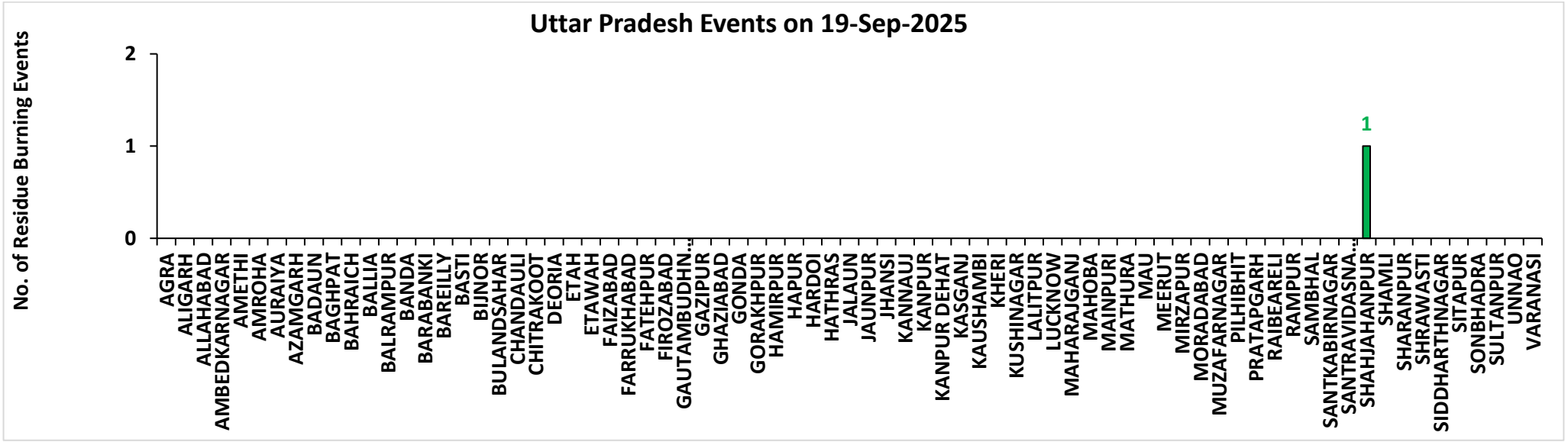
Fire Intensity (W/m²)

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



http://103.111.37.126/icar_geoportal/

District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep-19 Sep-2025)



District-wise cumulative number of residues burning events detected in 2020, 2021, 2022, 2023, 2024 and 2025
(Period: 15-19 September)

(a) Punjab

District	15- 19 Sep					
	2020	2021	2022	2023	2024	2025
Amritsar	55	13	31	6	15	32
Barnala	0	0	0	0	0	0
Bathinda	0	0	0	0	0	1
Faridkot	0	1	0	0	0	0
Fatehgarh Sahib	0	0	0	0	0	0
Fazilka	0	0	0	0	0	0
Firozpur	0	0	0	0	1	1
Gurdaspur	0	0	0	0	0	0
Hoshiarpur	0	0	0	0	0	1
Jalandhar	0	0	0	0	0	0
Kapurthala	0	0	0	0	0	0
Ludhiana	0	0	0	0	0	0
Malerkotla	0	0	0	0	0	0
Mansa	1	0	0	0	0	0
Moga	0	0	0	0	0	0
Muktsar	0	0	0	0	0	0
Pathankot	0	0	0	0	0	0
Patiala	0	2	0	0	0	6
Rupnagar	0	0	0	0	0	0
Sangrur	0	0	0	0	0	1
SAS NAGAR (Mohali)	0	0	1	0	0	0
SBS Nagar	0	0	1	0	0	0
Tarn Taran	1	0	7	0	2	5
Total	57	16	40	6	18	47

(b) Haryana

District	15 Sep-19 Sep					
	2020	2021	2022	2023	2024	2025
AMBALA	1	0	0	0	0	0
BHIWANI	0	0	0	0	0	0
CHARKHI DADRI	0	0	0	0	0	0
FARIDABAD	0	0	0	0	0	1
FATEHABAD	1	0	0	0	0	1
GURGAON	0	0	0	0	0	0
HISAR	0	0	0	0	0	0
JHAJJAR	0	0	0	0	0	0
JIND	0	0	1	1	0	0
KAITHAL	0	0	0	0	0	0
KARNAL	5	0	0	0	0	0
KURUKSHETRA	0	0	0	0	0	0
MAHENDRAGARH	0	0	0	0	0	0
MEWAT	0	0	0	0	0	0
PALWAL	0	0	0	0	0	0
PANCHKULA	0	0	0	0	0	0
PANIPAT	0	0	0	0	0	0
REWARI	0	0	0	0	0	0
ROHTAK	0	0	0	1	1	0
SIRSA	1	0	0	0	1	0
SONIPAT	0	0	0	1	0	1
YAMUNANAGAR	0	0	0	0	0	0
Total	8	0	1	3	2	3

(c) Uttar Pradesh

District	15 Sep-19 Sep																			
	2020	2021	2022	2023	2024	2025	GAUTAMBUDHNAGAR	0	0	0	0	0	0	MUZAFARNAGAR	0	0	0	0	0	0
AGRA	0	0	0	0	0	0	GAZIPUR	0	0	0	0	0	0	PILHIBHIT	0	0	0	0	0	0
ALIGARH	0	0	0	0	0	0	GHAZIABAD	0	0	0	0	1	0	PRATAPGARH	0	0	0	0	0	0
ALLAHABAD	0	0	0	0	0	0	GONDA	0	0	0	0	0	0	RAIBEARELI	1	0	0	0	0	0
AMBEDKARNAGAR	0	0	0	0	0	0	GORAKHPUR	0	0	0	0	0	0	RAMPUR	0	1	0	0	0	0
AMETHI	0	0	0	0	0	0	HAMIRPUR	0	0	0	0	0	0	SAMBHAL	0	0	0	0	0	0
AMROHA	0	0	0	0	0	0	HAPUR	0	0	0	0	0	0	SANTKABIRNAGAR	0	0	0	0	0	0
AURAIYA	0	0	0	0	0	1	HARDOI	0	0	0	0	0	0	SANTRAVIDASNAGAR	0	0	0	0	0	0
AZAMGARH	0	0	0	0	0	0	HATHRAS	0	0	0	0	0	0	SHAHJAHANPUR	0	0	0	0	0	1
BADAUN	0	0	0	0	0	0	JALAUN	0	0	0	0	0	0	SHAMLI	0	0	0	0	0	0
BAGHPAT	0	0	0	0	0	0	JAUNPUR	0	0	0	0	0	0	SHARANPUR	0	0	0	0	0	0
BAHRAICH	0	0	0	0	0	0	JHANSI	0	0	0	0	0	0	SHRAWASTI	0	0	0	0	0	0
BALLIA	0	0	0	0	0	0	KANNAUJ	0	0	0	0	0	0	SIDDHARTHANAGAR	0	0	0	0	0	0
BALRAMPUR	0	0	0	0	0	0	KANPUR	0	1	0	0	0	0	SITAPUR	0	0	0	0	0	0
BANDA	0	0	0	0	0	0	KANPUR DEHAT	0	0	0	0	0	0	SONBHADRA	0	0	0	0	0	0
BARABANKI	0	0	0	0	0	0	KASGANJ	0	0	0	0	0	0	SULTANPUR	0	0	0	0	0	0
BAREILLY	0	0	0	0	0	0	KAUSHAMBI	0	0	0	0	0	0	UNNAO	0	0	0	0	0	0
BASTI	0	0	0	0	0	0	KHERI	0	0	0	0	0	0	VARANASI	0	0	0	0	0	0
BIJNOR	0	0	0	0	0	0	KUSHINAGAR	0	0	0	0	0	0	Total	1	2	0	2	1	3
BULANDSAHAR	0	0	0	0	0	0	LALITPUR	0	0	0	0	0	0							
CHANDAULI	0	0	0	0	0	0	LUCKNOW	0	0	0	0	0	0							
CHITRAKOOT	0	0	0	0	0	0	MAHARAJGANJ	0	0	0	0	0	0							
DEORIA	0	0	0	2	0	0	MAHOBA	0	0	0	0	0	0							
ETAH	0	0	0	0	0	0	MAINPURI	0	0	0	0	0	0							
ETAWAH	0	0	0	0	0	0	MATHURA	0	0	0	0	0	1							
FAIZABAD	0	0	0	0	0	0	MAU	0	0	0	0	0	0							
FARRUKHABAD	0	0	0	0	0	0	MEERUT	0	0	0	0	0	0							
FATEHPUR	0	0	0	0	0	0	MIRZAPUR	0	0	0	0	0	0							
FIROZABAD	0	0	0	0	0	0	MORADABAD	0	0	0	0	0	0							

(d) Delhi

District	15 Sep-19 Sep					
	2020	2021	2022	2023	2024	2025
CENTRAL	0	0	0	0	0	0
EAST	0	0	0	0	0	0
NEW DELHI	0	0	0	0	0	0
NORTH	0	0	0	0	0	0
NORTH EAST	0	0	0	0	0	0
NORTH WEST DELHI	0	0	0	0	0	0
SHAHADRA	0	0	0	0	0	0
SOUTH	0	0	0	0	0	0
SOUTH EAST	0	0	0	0	0	0
SOUTH WEST DELHI	0	0	0	0	0	0
WEST DELHI	0	0	0	0	0	0
Total	0	0	0	0	0	0

(e) Rajasthan

District	15 Sep-19 Sep					
	2020	2021	2022	2023	2024	2025
AJMER	0	0	0	0	0	0
ALWAR	0	0	0	0	0	0
BANSWARA	0	0	0	0	0	0
BARAN	0	0	0	0	0	0
BARMER	0	0	0	0	0	0
BHARATPUR	0	0	0	0	0	0
BHILWARA	1	0	0	0	0	0
BIKANER	0	0	0	0	0	0
BUNDI	0	0	0	0	0	0
CHITTAURGARH	0	0	0	0	0	0
CHURU	0	0	0	0	0	0
DAUSA	0	0	0	0	0	0
DHOLPUR	0	0	0	0	0	0
DUNGARPUR	0	0	0	0	0	0
GANGANAGAR	0	0	0	0	0	0
HANUMANGARH	0	0	0	0	0	0
JAIPUR	0	0	0	0	0	0
JAISELMER	0	0	0	0	0	0
JALOR	0	0	0	0	0	0
JHALAWAR	0	0	0	0	0	0
JHUNJHUNUN	0	0	0	0	0	0
JODHPUR	0	0	0	0	0	0
KARALI	0	0	0	0	0	0
KOTA	0	0	0	0	0	0
NAGOUR	0	0	0	0	0	0
PALI	0	0	0	0	0	1
PRATAPGARH	0	0	0	0	0	0
RAJSMAND	0	0	0	0	0	0
SIKAR	0	0	0	0	0	0
SIROHI	0	0	0	0	0	0
SWAIMADHOPUR	0	0	0	0	0	0
TONK	0	0	0	0	0	0
UDAIPUR	0	0	0	0	0	0
Total	1	0	0	0	0	1

(f) Madhya Pradesh

District	15 Sep-19 Sep													
	2020	2021	2022	2023	2024	2025	PANNA	0	0	0	0	0	0	
ALIRAJPUR	0	0	0	0	0	0	RAISEN	0	0	0	0	0	0	
ANUPPUR	0	0	0	0	0	0	RAJGARH	0	0	0	0	0	0	
ASHOKNAGAR	0	0	0	0	0	0	RATLAM	0	0	0	0	0	0	
BALAGHAT	0	0	0	0	0	0	REWA	0	0	0	0	0	0	
BARWANI	0	0	0	0	0	0	SAGAR	0	0	0	0	0	0	
BETUL	0	0	0	0	0	0	SATNA	0	0	0	0	0	0	
BHIND	0	0	0	0	0	0	SEHORE	0	0	0	0	0	0	
BHOPAL	0	0	0	0	0	0	SEONI	0	0	0	0	0	0	
BURHANPUR	0	0	0	0	0	0	SHAHDOL	0	0	0	0	0	0	
CHHATARPUR	0	0	0	0	0	0	SHAJAPUR	0	0	0	0	0	0	
CHHINDWARA	0	0	0	0	0	0	SHEOPUR	0	0	0	0	0	0	
DAMOH	0	0	0	0	0	0	SHIVPURI	0	0	0	0	0	0	
DATIA	0	0	0	0	0	0	SIDHI	0	0	0	0	0	0	
DEWAS	0	0	0	0	0	0	SINGRAULI	0	0	0	0	0	0	
DHAR	0	0	0	0	1	0	TIKAMGARH	0	0	0	0	0	0	
DINDORI	0	0	0	0	0	0	UJJAIN	0	0	0	0	0	0	
EAST NIMAR	0	0	0	0	0	0	UMARIA	0	0	0	0	0	0	
GUNA	0	0	0	0	0	0	VIDESHA	0	0	0	0	0	0	
GWALIOR	0	0	0	0	0	0	WEST NIMAR	0	0	0	0	0	0	
HARDA	2	0	0	0	0	0	Total	2	0	0	1	1	0	
HOSHANGABAD	0	0	0	1	0	0								
INDORE	0	0	0	0	0	0								
JABALPUR	0	0	0	0	0	0								
JHABUA	0	0	0	0	0	0								
KATNI	0	0	0	0	0	0								
MANDLA	0	0	0	0	0	0								
MANDSAUR	0	0	0	0	0	0								
MORENA	0	0	0	0	0	0								
NARSHIMAPURA	0	0	0	0	0	0								
NIMACH	0	0	0	0	0	0								

State-wise and date-wise number of paddy residue burning events detected in 2020 ,2021 ,2022, 2023, 2024 and 2025

(Period: 15-19 September)

Number of Paddy Residue Burning Events Detected

Date	Punjab						Haryana						Uttar Pradesh					
	2020	2021	2022	2023	2024	2025	2020	2021	2022	2023	2024	2025	2020	2021	2022	2023	2024	2025
15-Sep	5	0	14	0	11	5	2	0	0	1	1	1	1	0	0	0	0	1
16-Sep	0	2	0	6	0	18	1	0	0	1	0	0	0	0	0	2	0	0
17-Sep	5	0	1	0	5	11	3	0	0	0	1	0	0	0	0	0	1	0
18-Sep	17	9	7	0	2	12	0	0	1	0	0	1	0	1	0	0	0	1
19-Sep	30	5	18	0	0	1	2	0	0	1	0	1	0	1	0	0	0	1
Total	57	16	40	6	18	47	8	0	1	3	2	3	1	2	0	2	1	3

Number of Paddy Residue Burning Events Detected

Date	Delhi						Rajasthan						Madhya Pradesh					
	2020	2021	2022	2023	2024	2025	2020	2021	2022	2023	2024	2025	2020	2021	2022	2023	2024	2025
15-Sep	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
18-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	1	1	0

Details of residue burning events in Punjab on 19-Sep-2025

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	TARN TARAN	KHADUR SAHIB	S-NPP	31.49339	75.04513	13:19:13	D	9.80

Details of residue burning events in Haryana on 19-Sep-2025

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	SONIPAT	RAI	S-NPP	28.85071	77.16017	02:09:13	N	0.40

Details of residue burning events in Uttar Pradesh on 19-Sep-2025

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.91116	79.87542	13:22:00	D	1.01

The study used data received from following Satellites at NRSC 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

**The rice mask for the Punjab and Haryana were provided by MNCFC, MoA&FW, Govt of India
The kharif crop mask for Delhi, Uttar Pradesh, Rajasthan and Madhya Pradesh were provided by NRSC**

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)
