



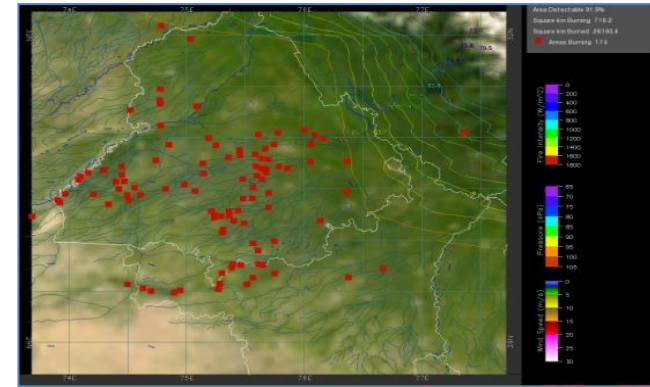
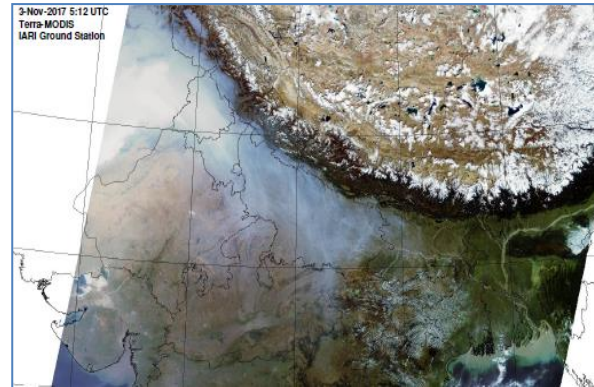
Bulletin No. 36

Events Date:
20-Oct-2022

Issued on:
20-Oct-2022



MONITORING PADDY RESIDUE BURNING IN INDIA USING SATELLITE REMOTE SENSING DURING 2022



Prepared by:

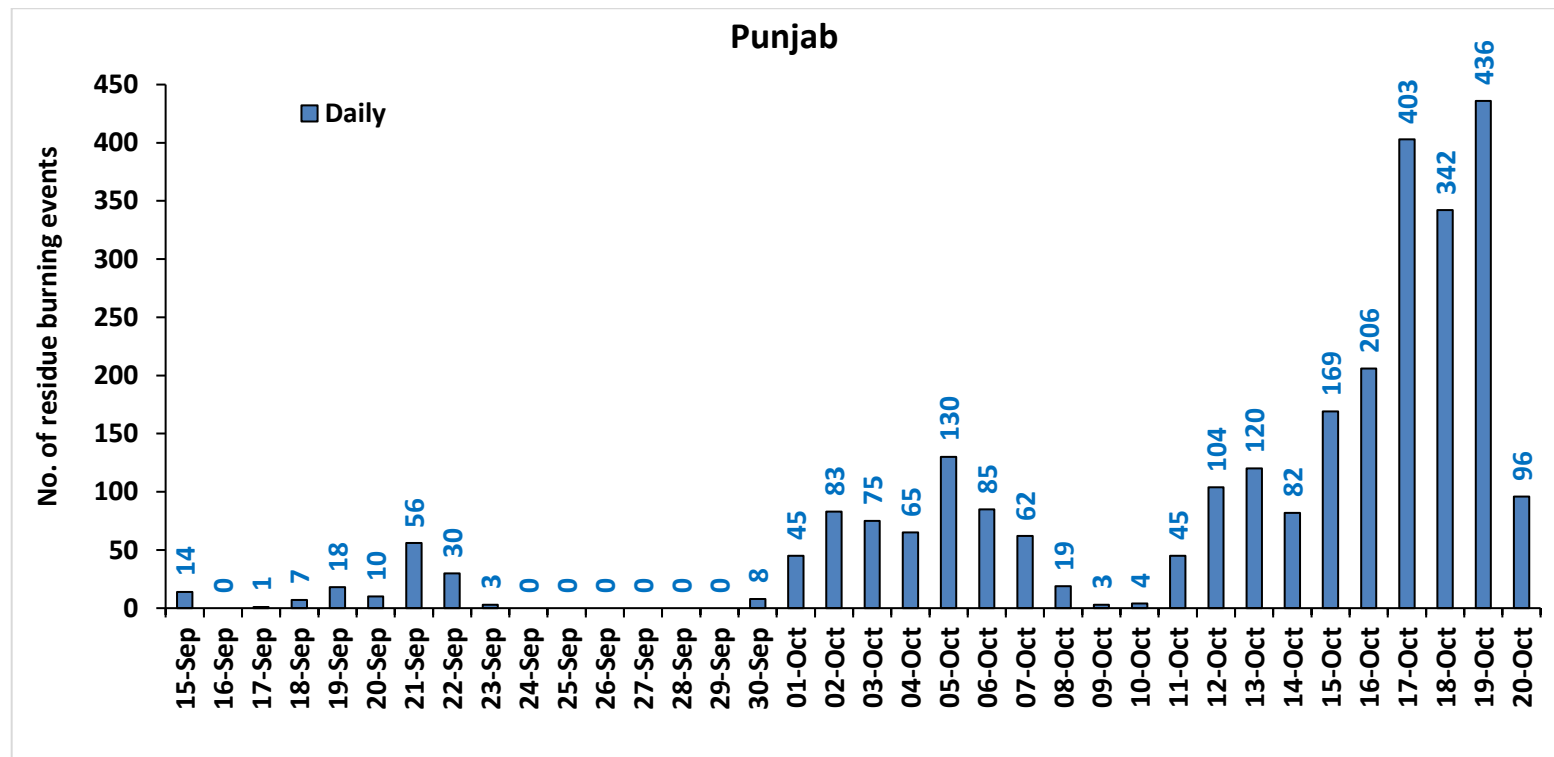
Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012

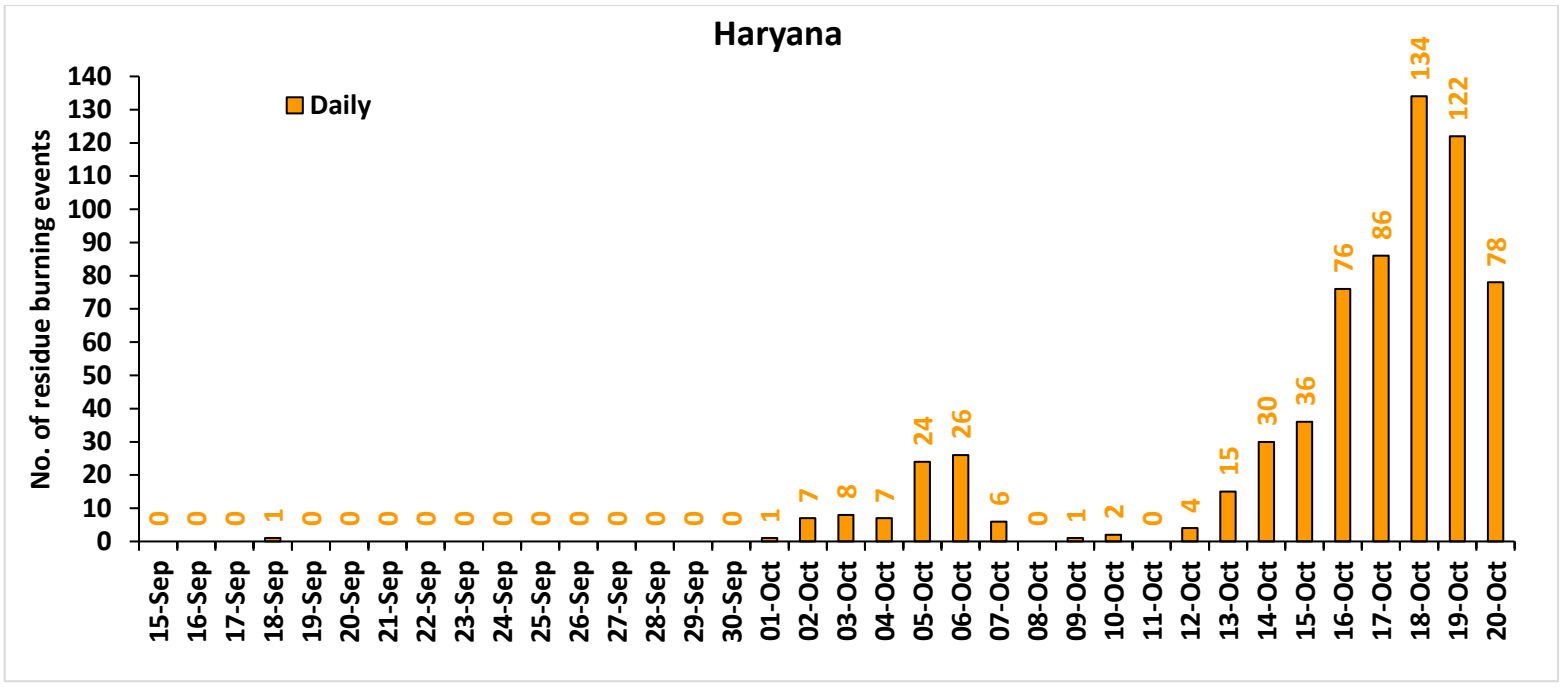
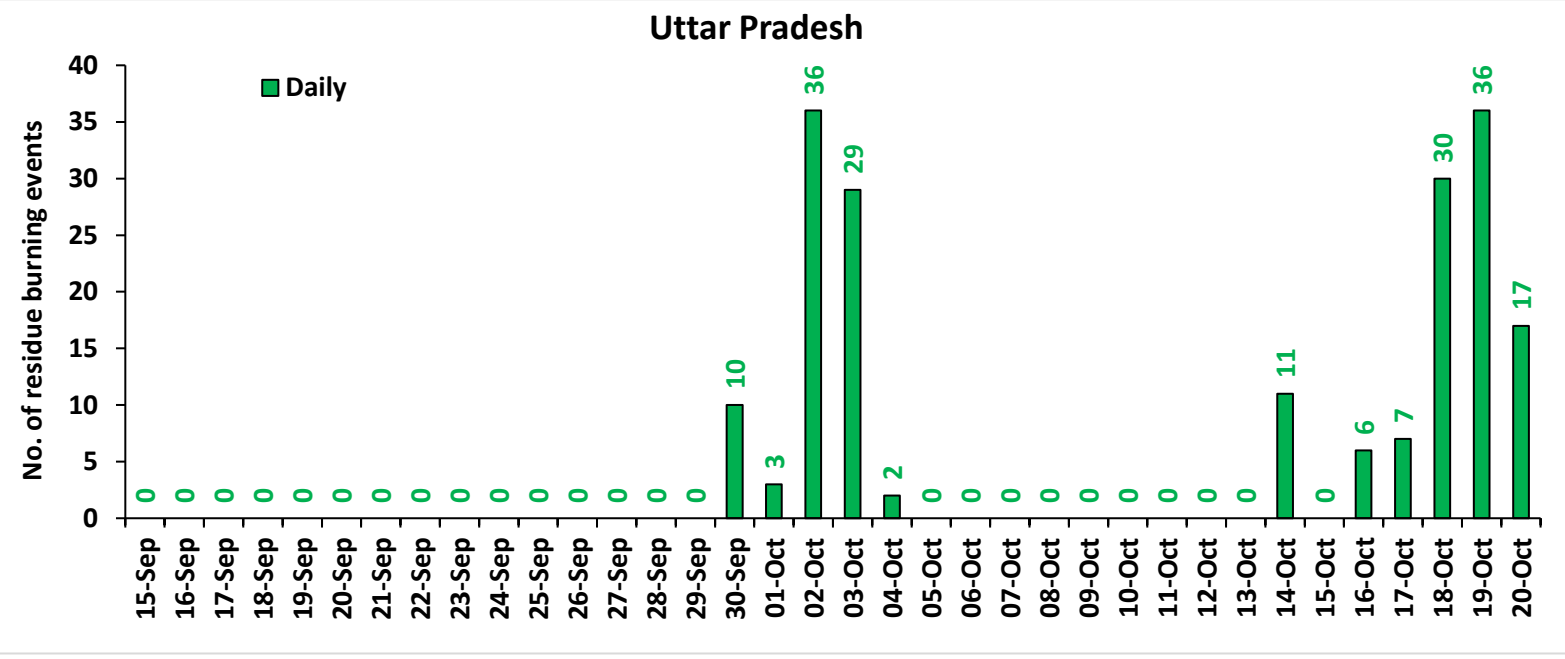
<http://creams.iari.res.in>

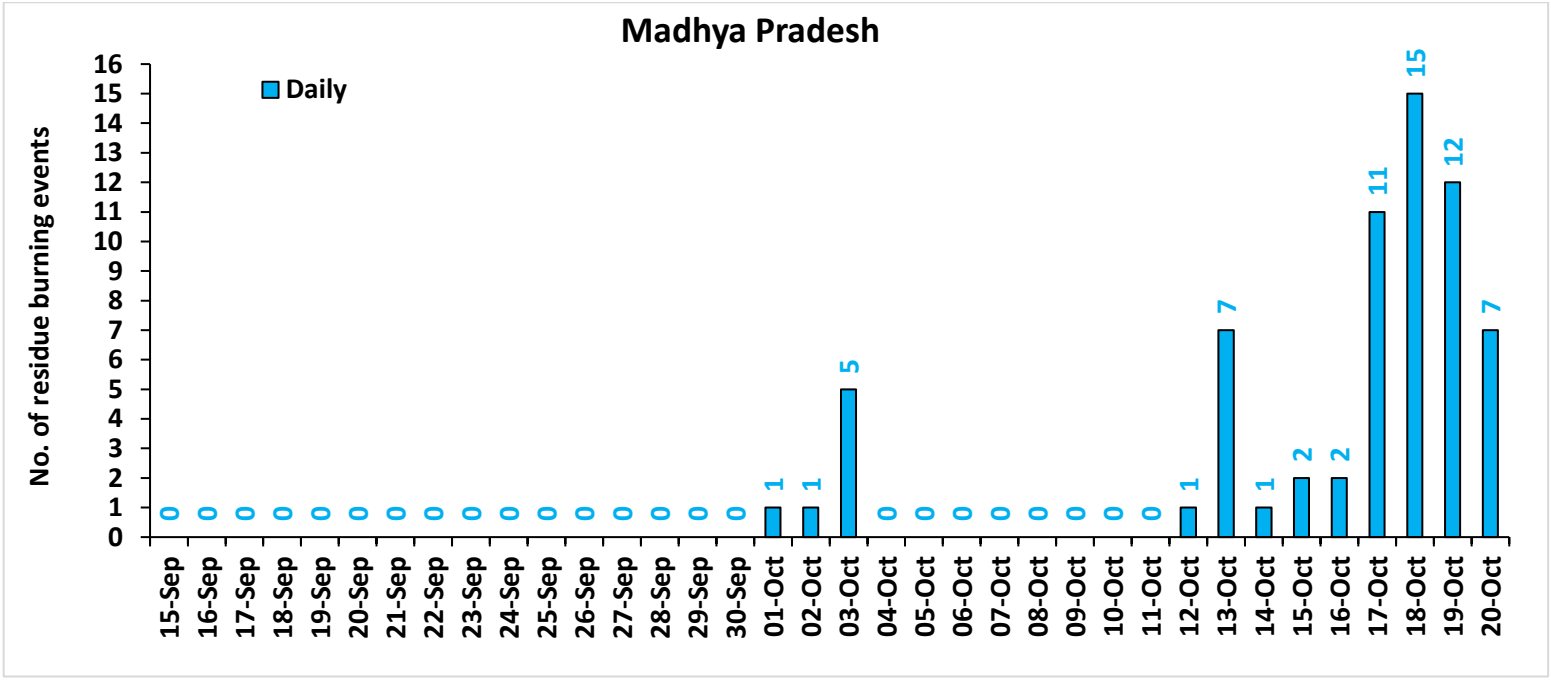
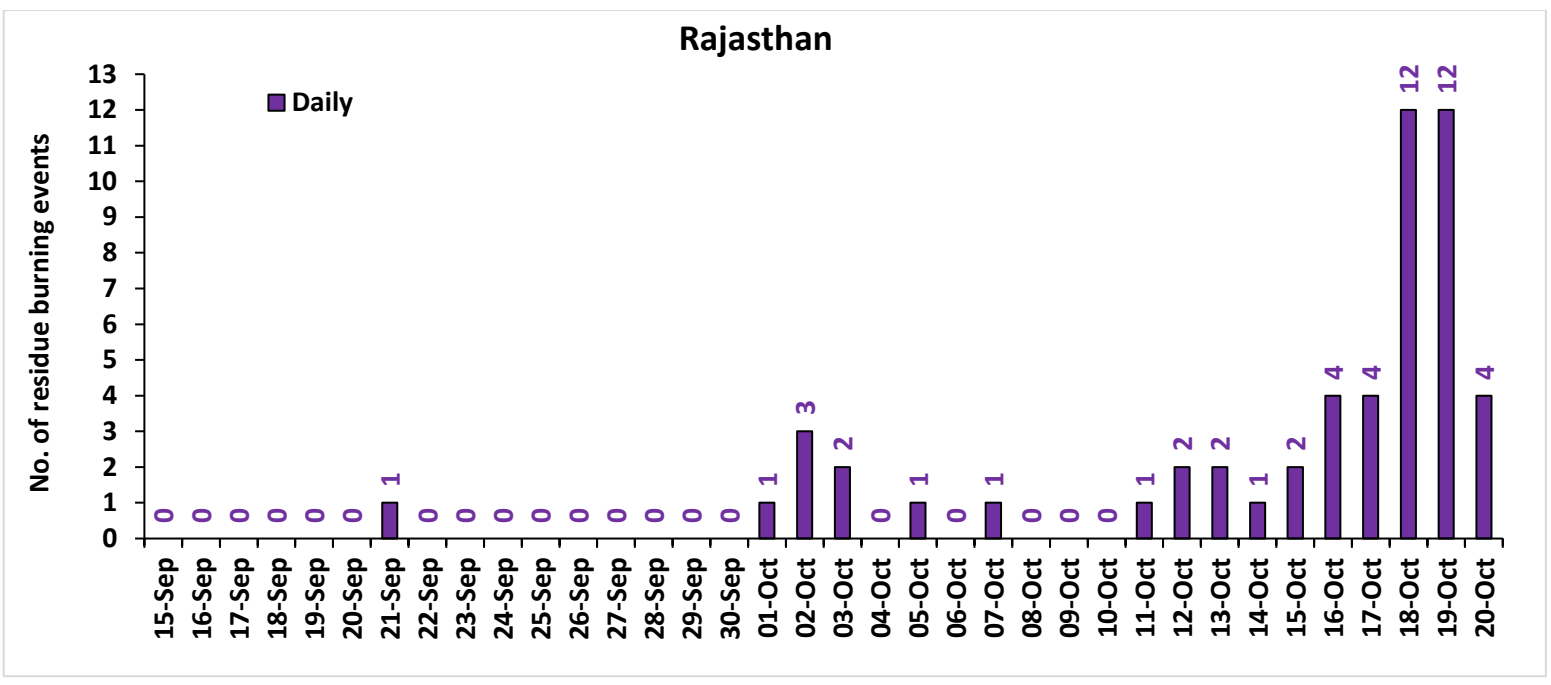
Highlights for 20-Oct-2022

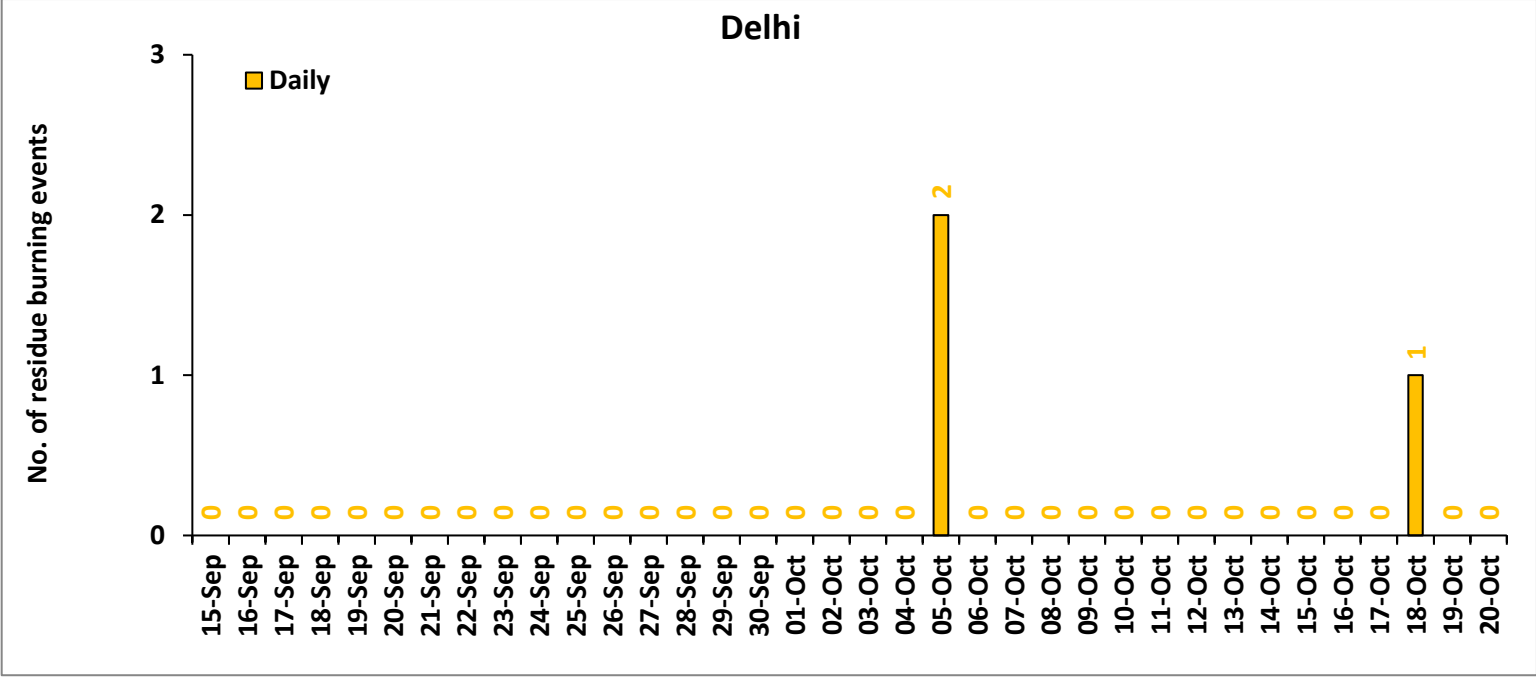
- The active fire events due to rice residue burning were monitored using satellite remote sensing, following the "Standard Protocol for Estimation of Crop Residue Burning Fire Events using Satellite Data".
- Satellites detected **202** residue burning events in the six study States on 20-Oct-2022.
- The state wise events detected on 20-Oct-2022 were **96** in Punjab, **78** in Haryana, **17** in UP, **0** in Delhi, **4** in Rajasthan and **7** in MP.
- Total **3693** burning events were detected in the six states between 15-Sept-2022 and 20-Oct-2022, which are distributed as **2721**, **664**, **187**, **3**, **53** and **65** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.

Temporal distribution of rice residue burning events for the study States in 2022

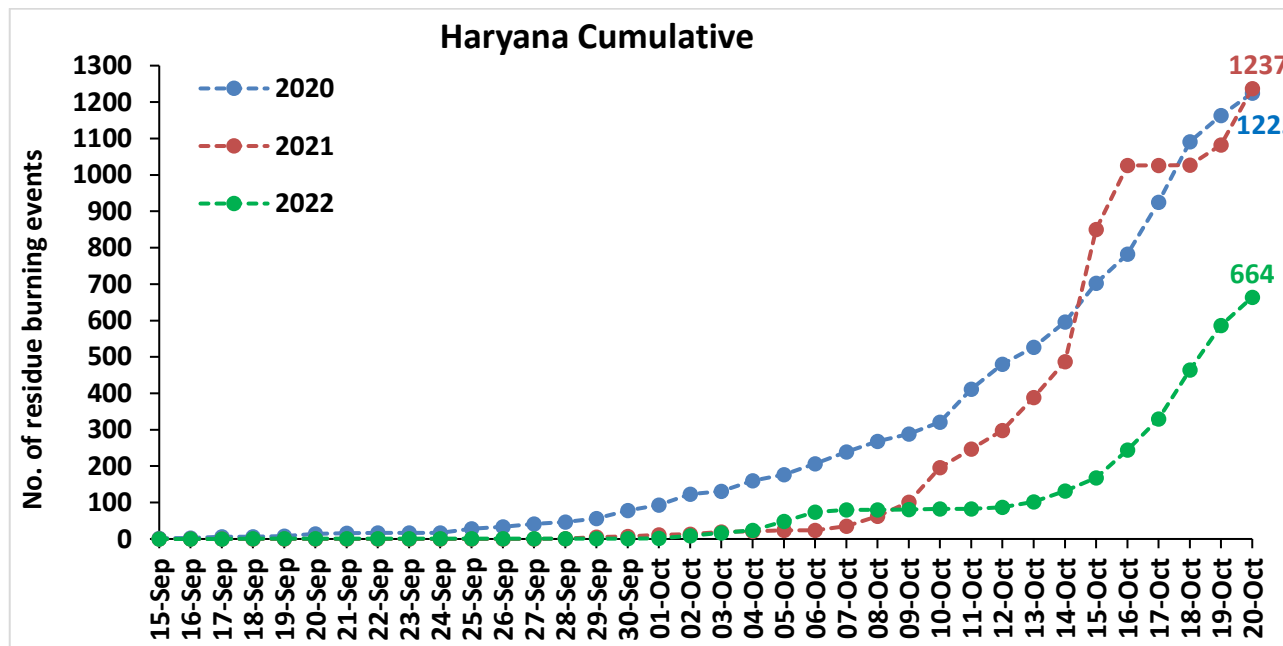
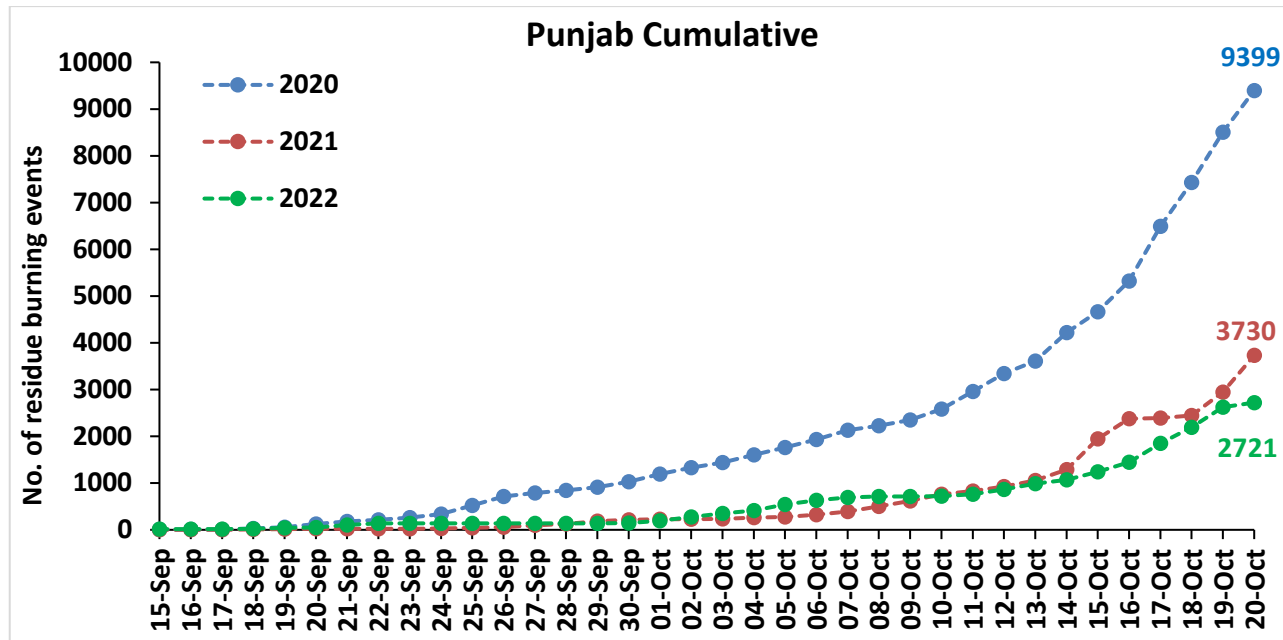


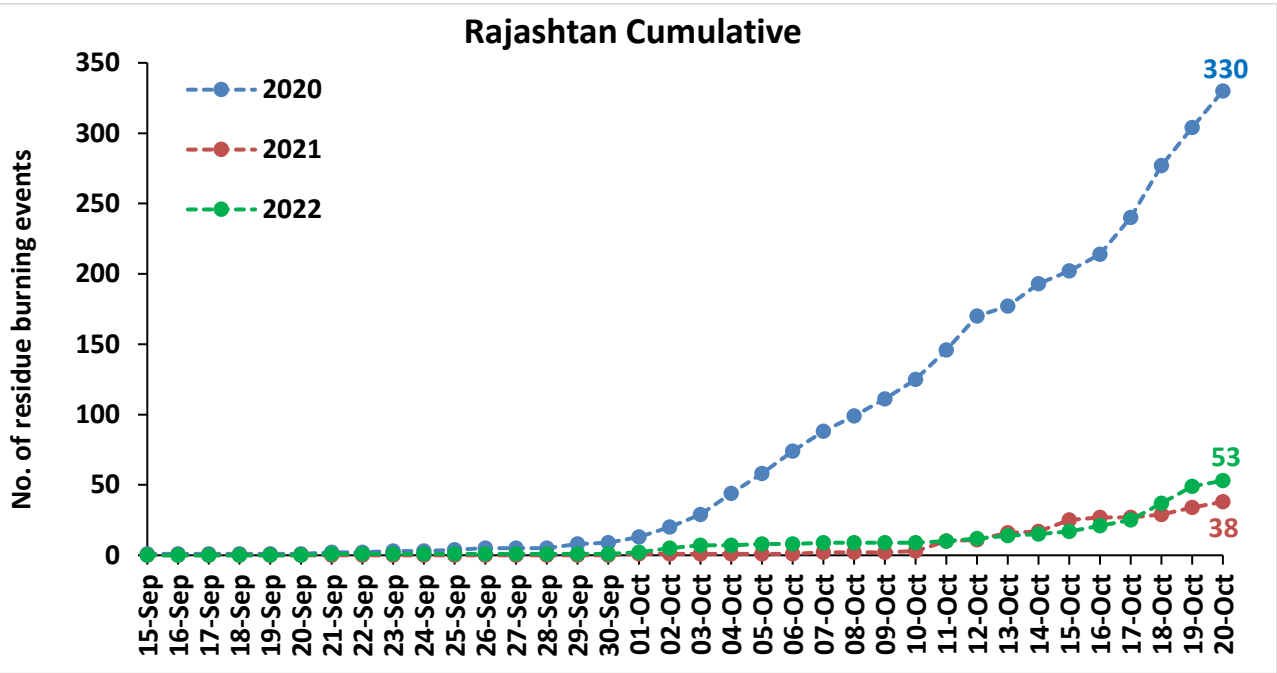
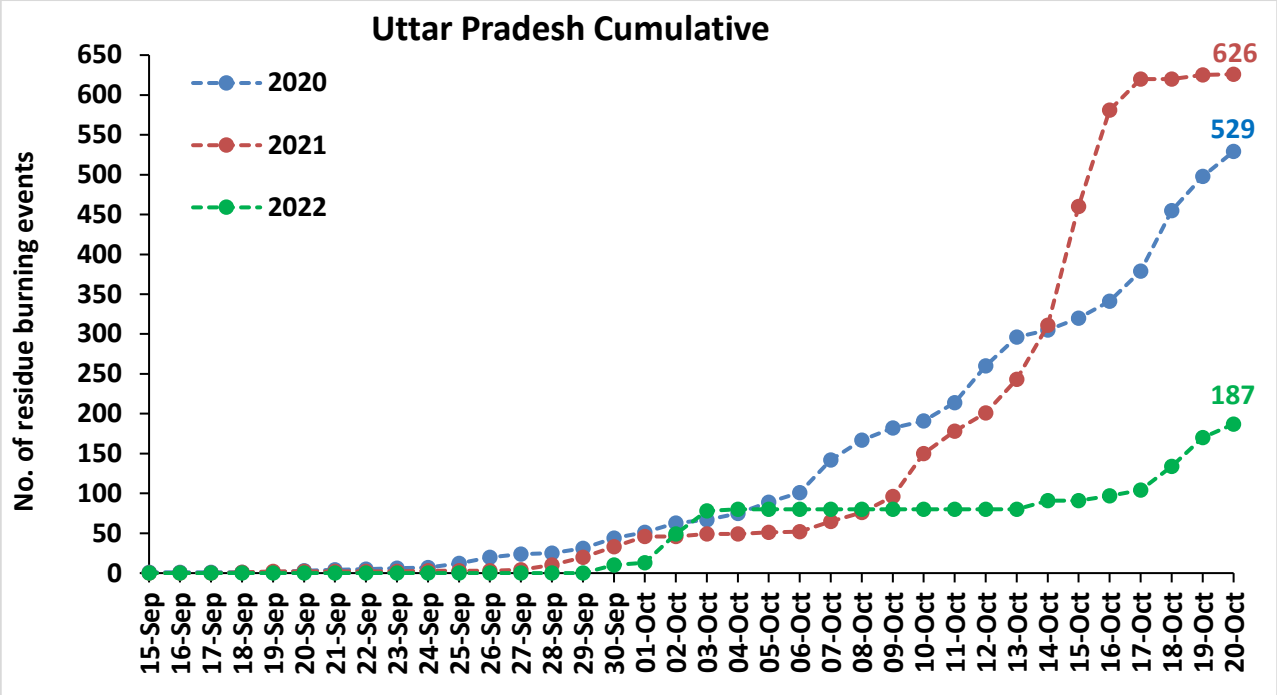


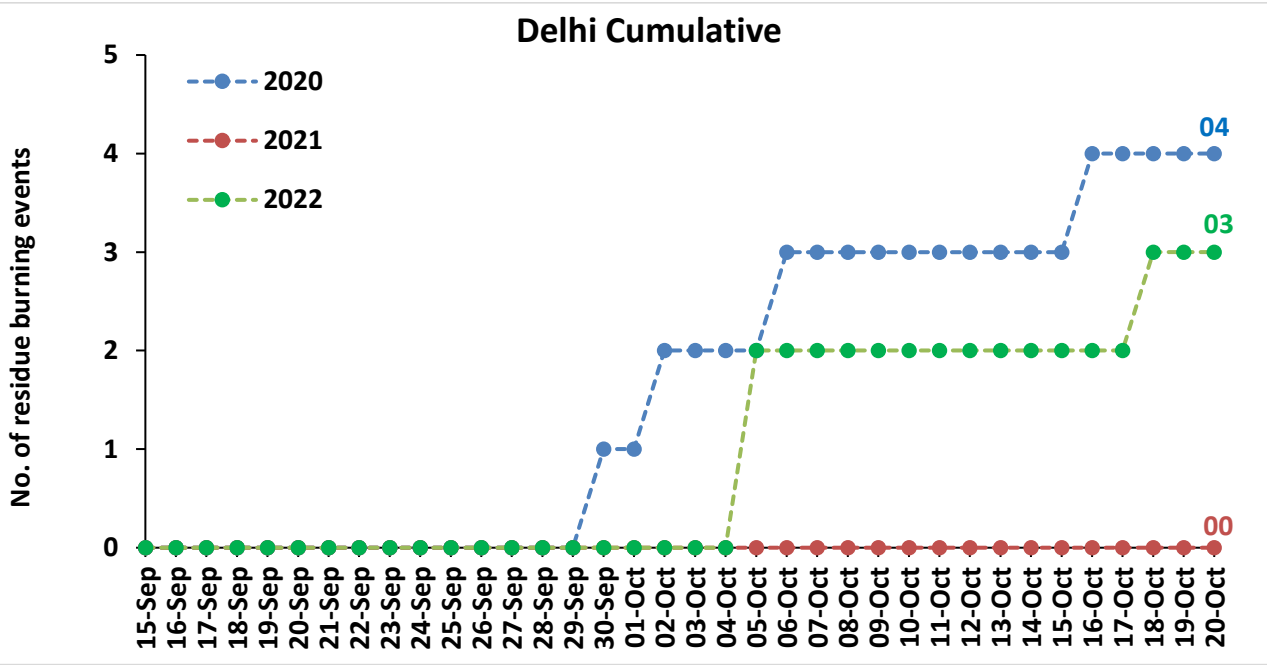
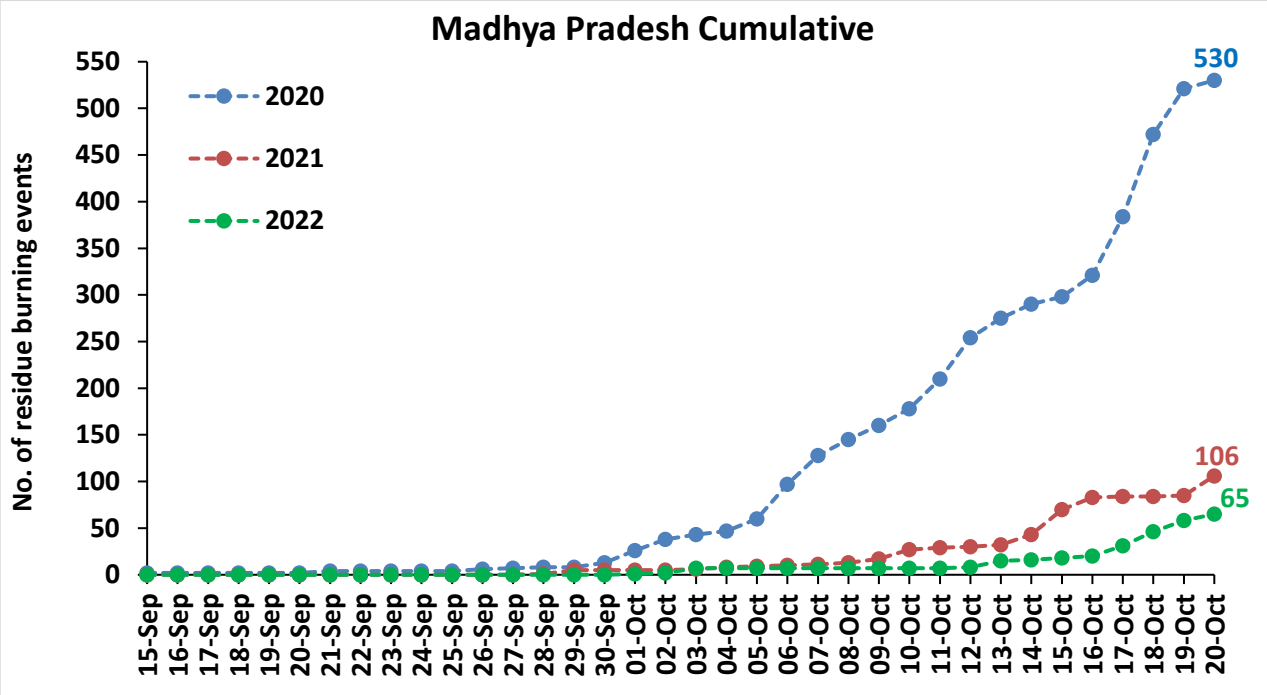




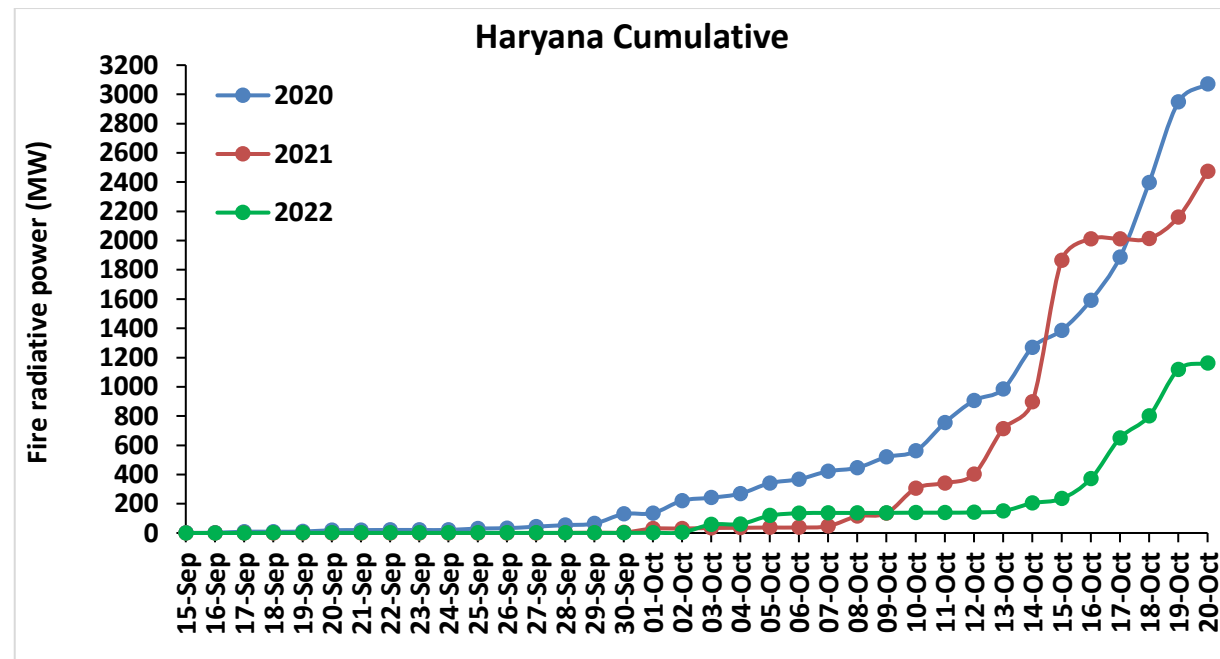
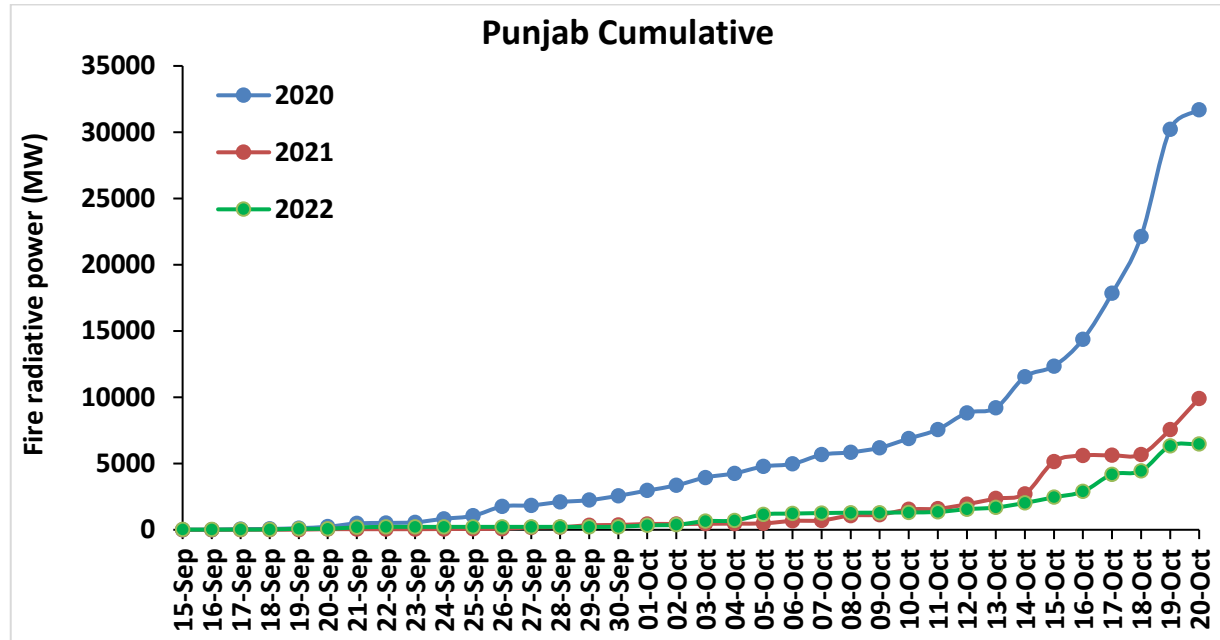
Comparison of residue burning events in current year (2022) with previous years (2020 and 2021) for the study States

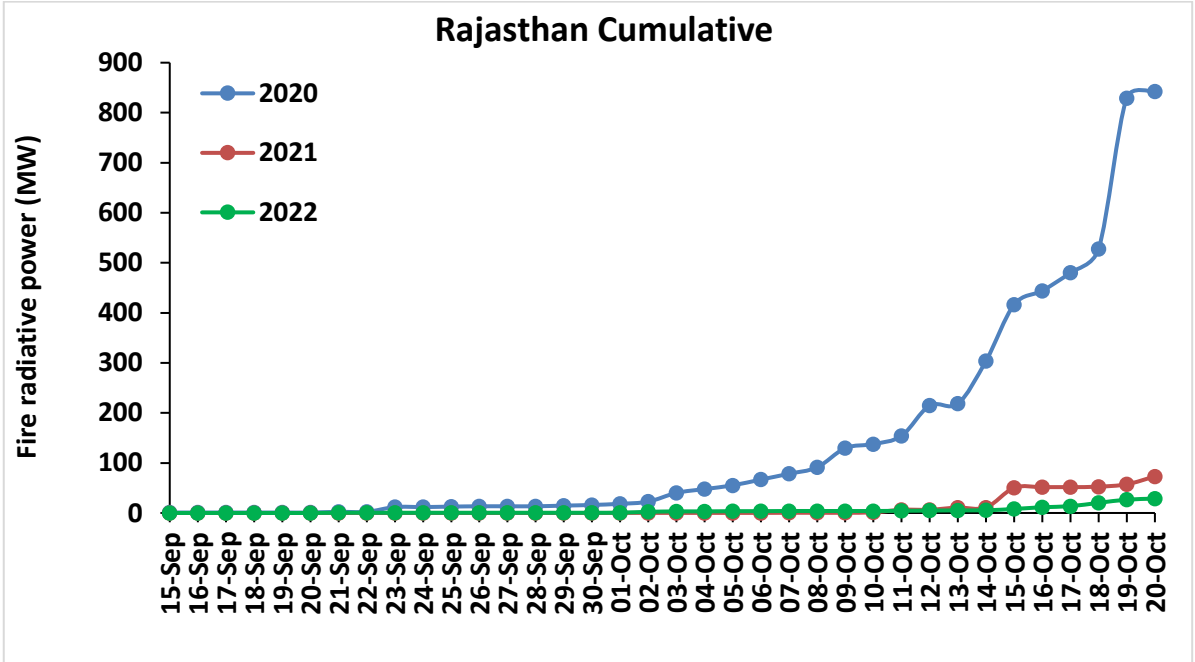
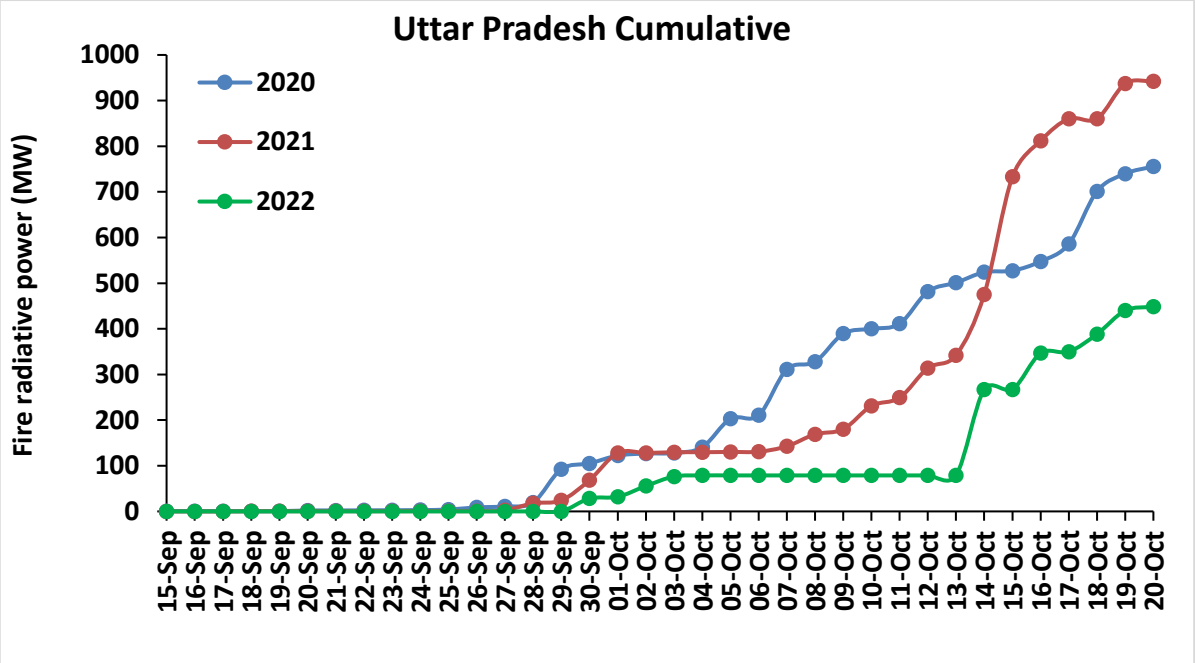


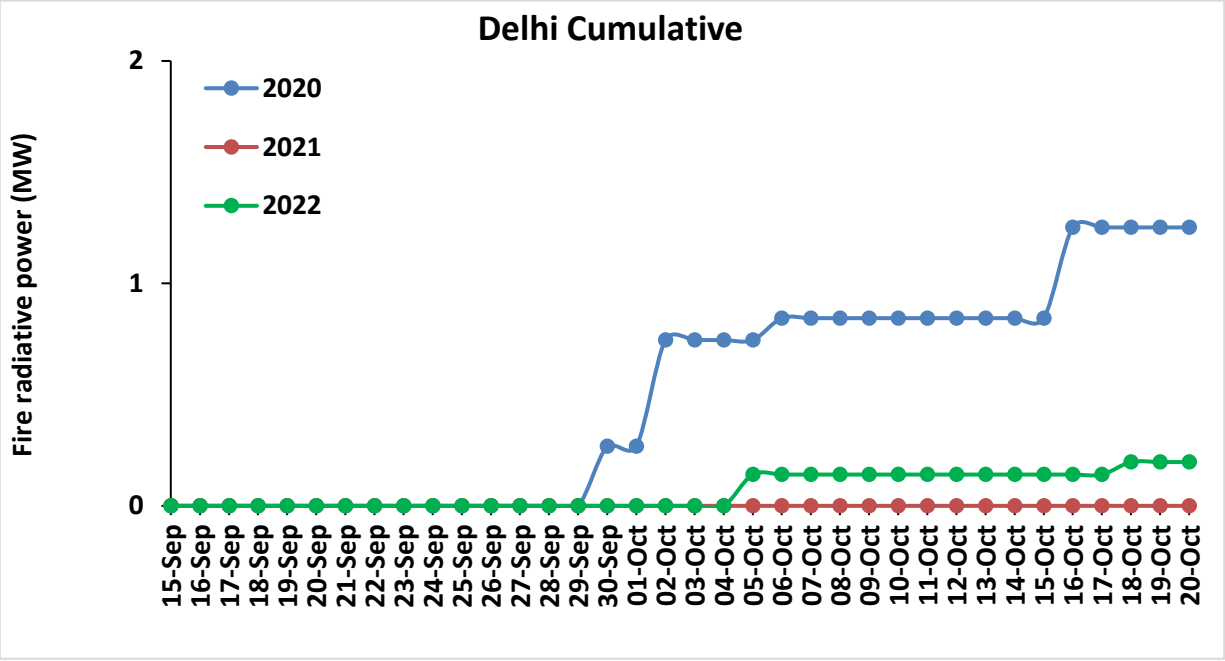
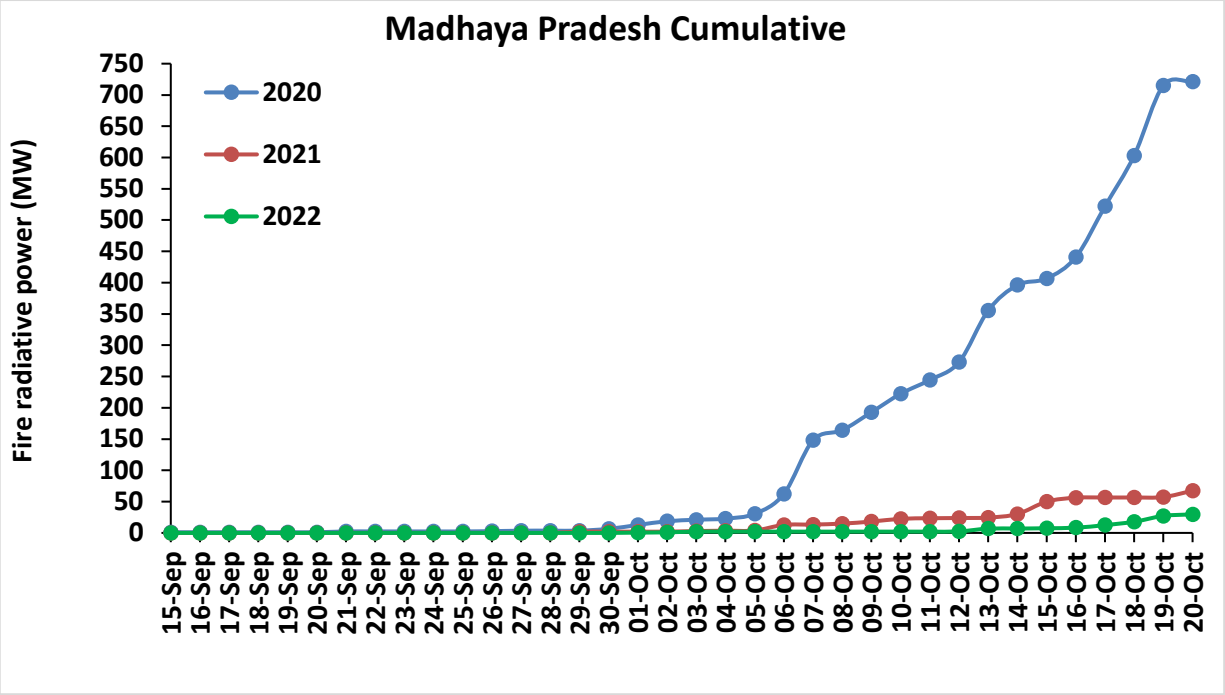




Comparison of residue burning fire power in current year (2022) with previous years (2021 and 2020) for the study States

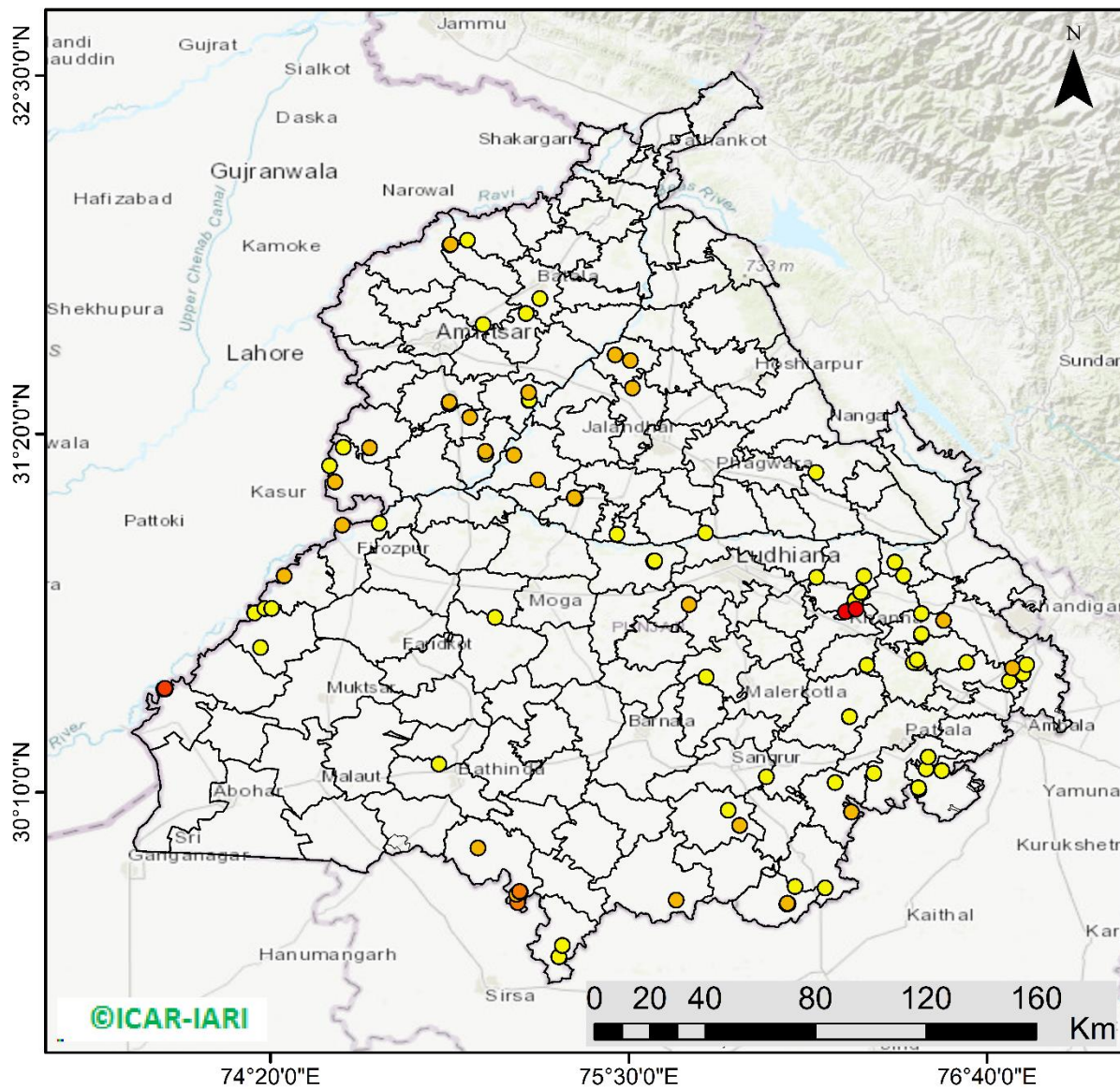






Punjab

RICE RESIDUE BURNING IN PUNJAB



96 burning events detected in Punjab during (20th Oct 2022)

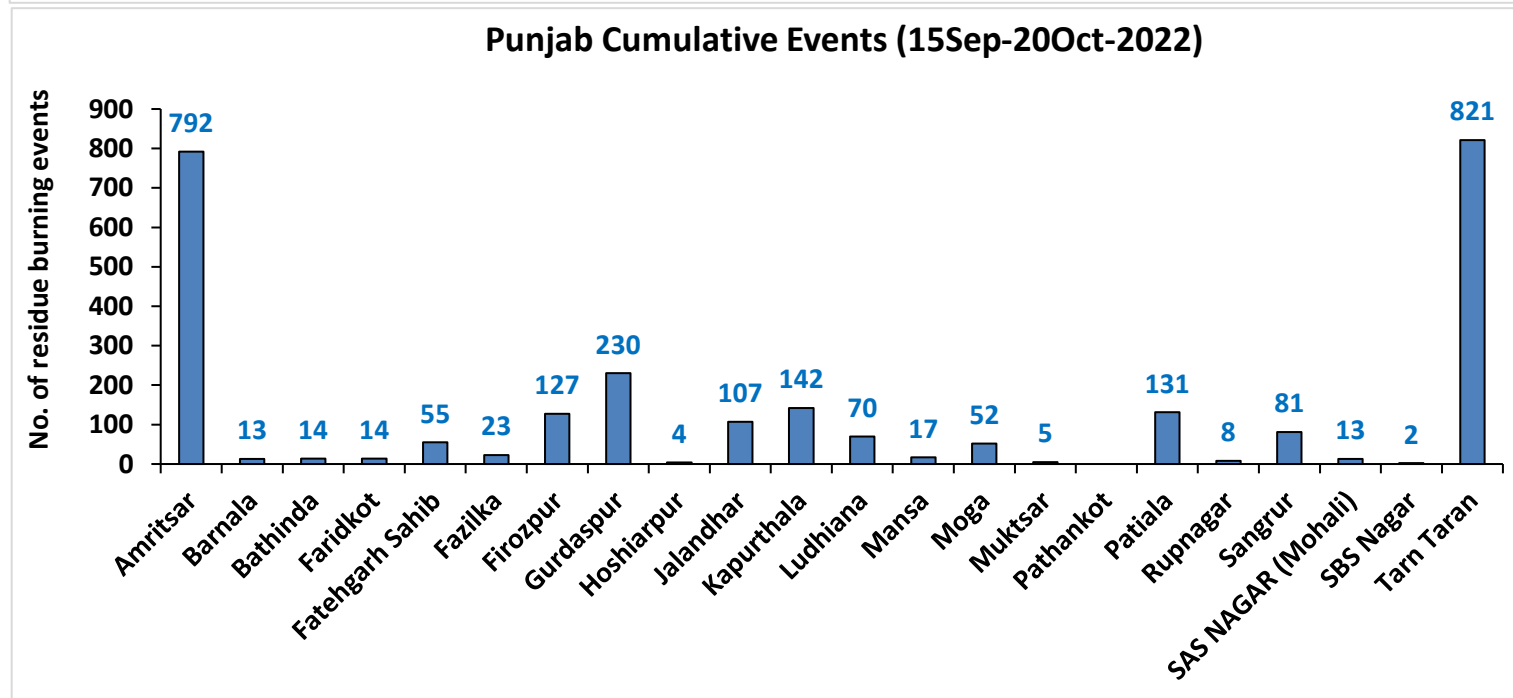
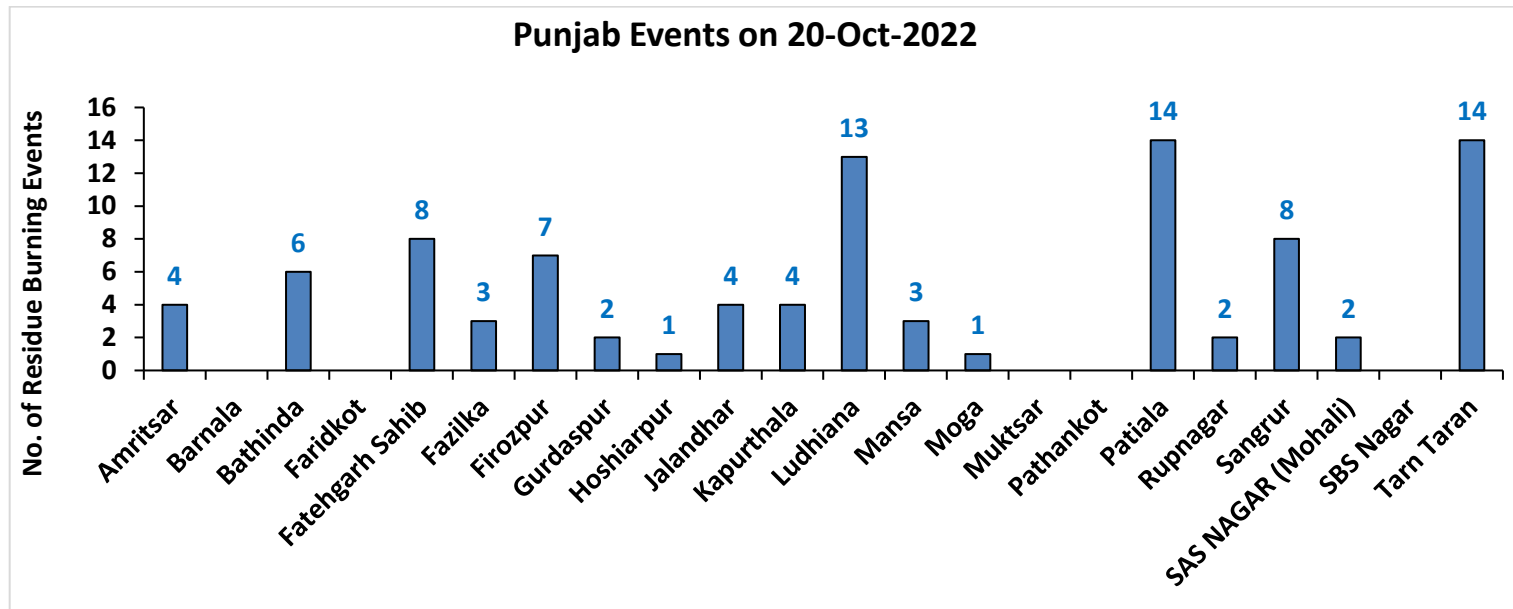
Fire Intensity (W/m²)

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



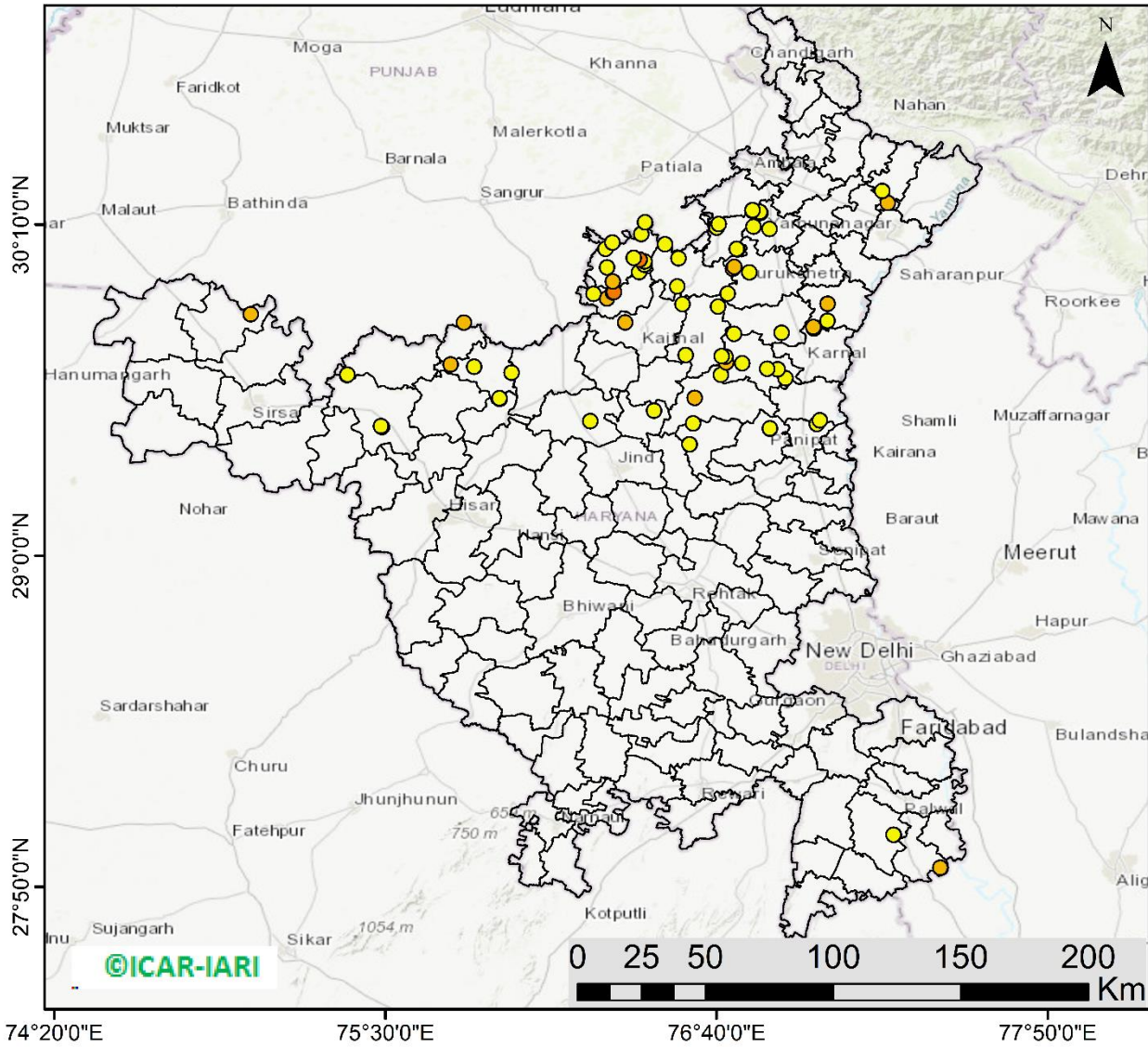
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (15Sep- 20Oct-2022)



Haryana

RICE RESIDUE BURNING IN HARYANA



78 burning events detected in Haryana on (20th Oct 2022)

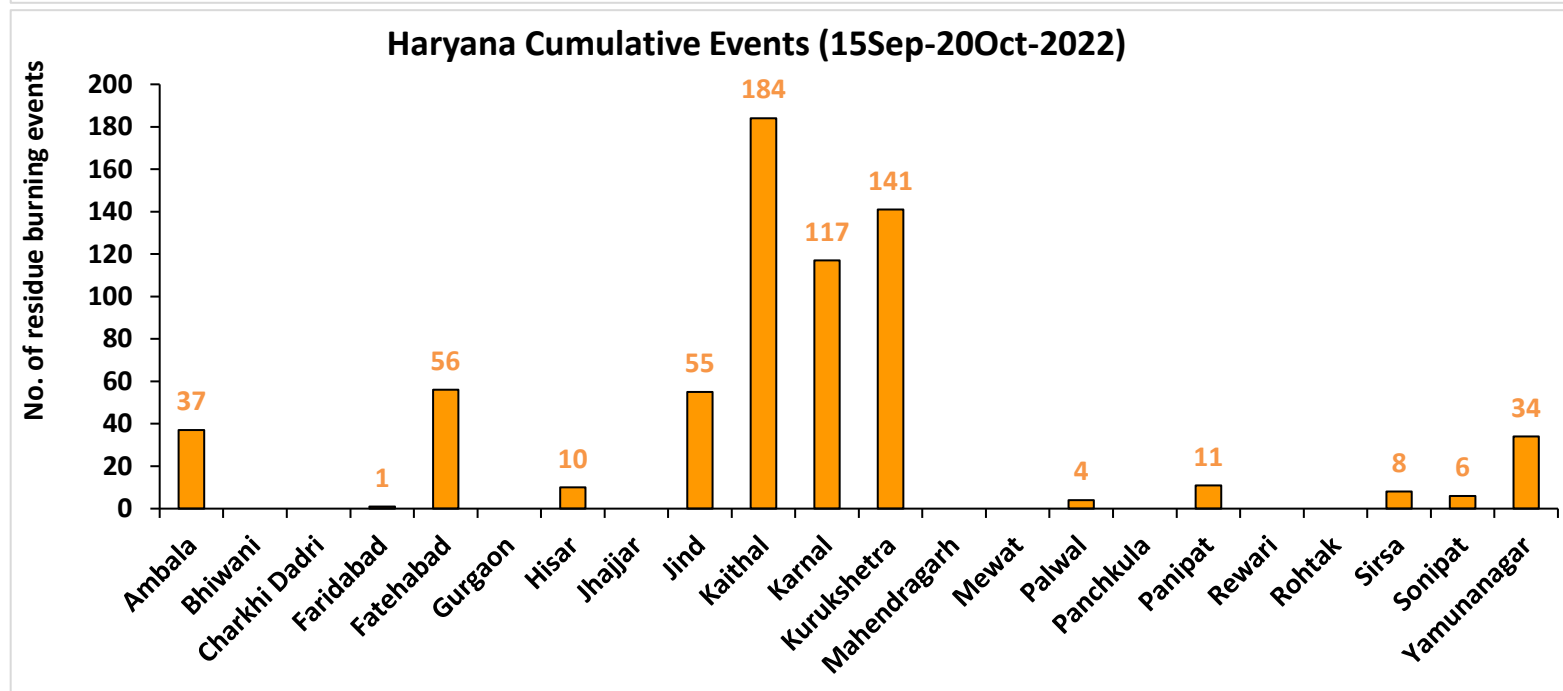
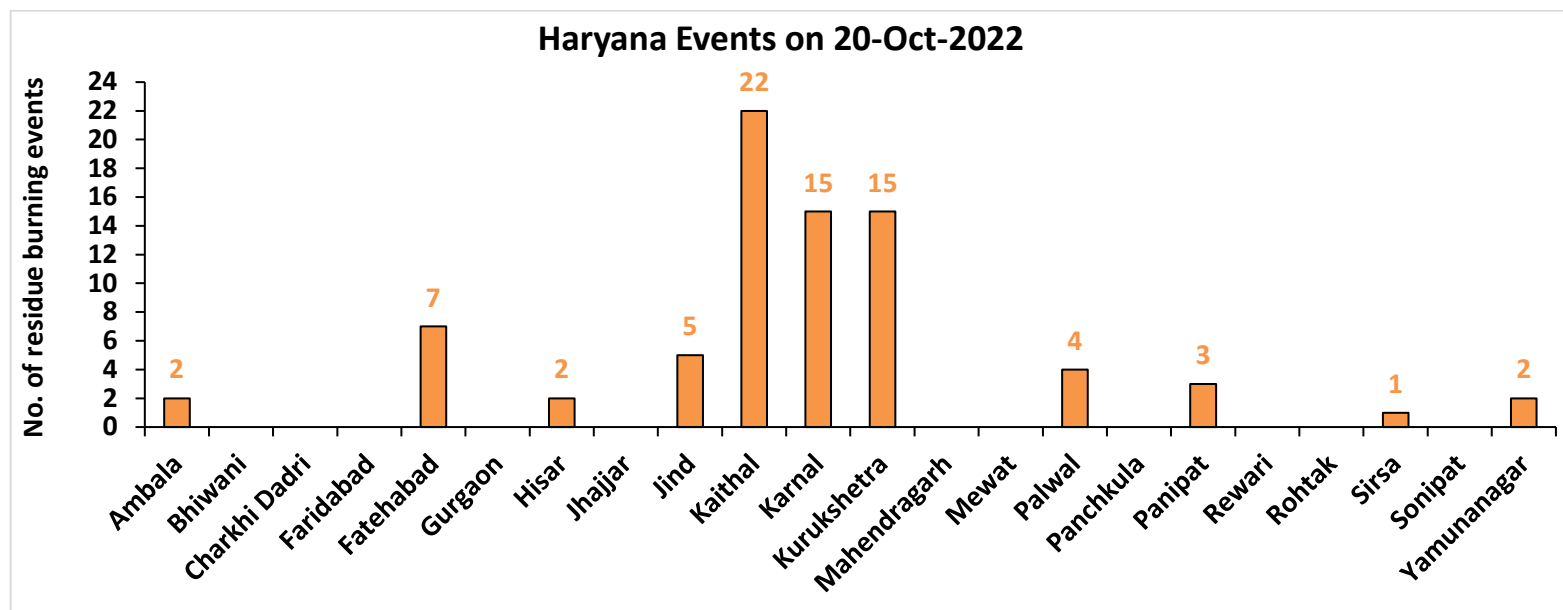
Fire Intensity (W/m²)

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



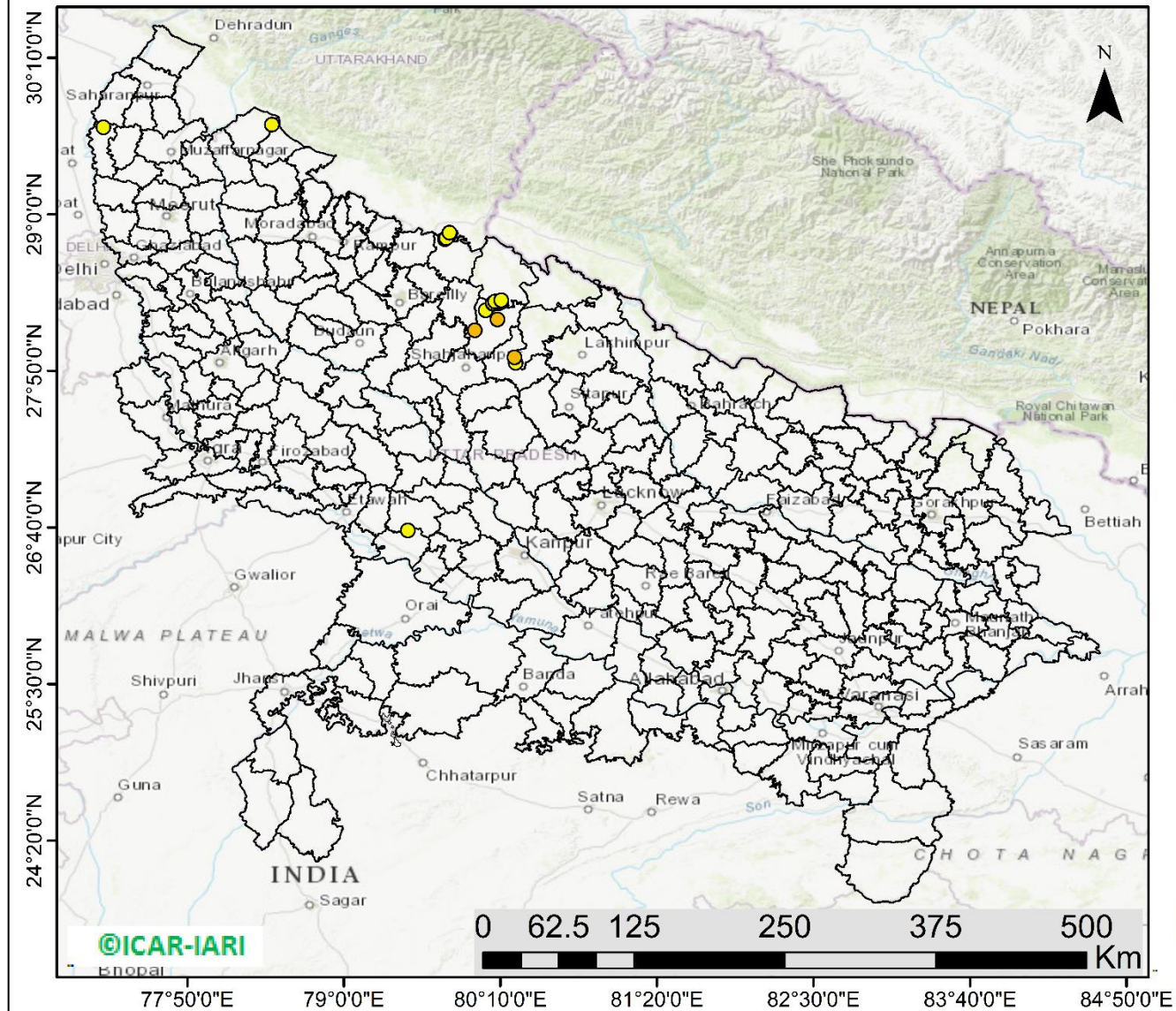
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Haryana (15Sep- 20Oct-2022)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



17 burning events
detected in Uttar Pradesh on
(20th Oct 2022)

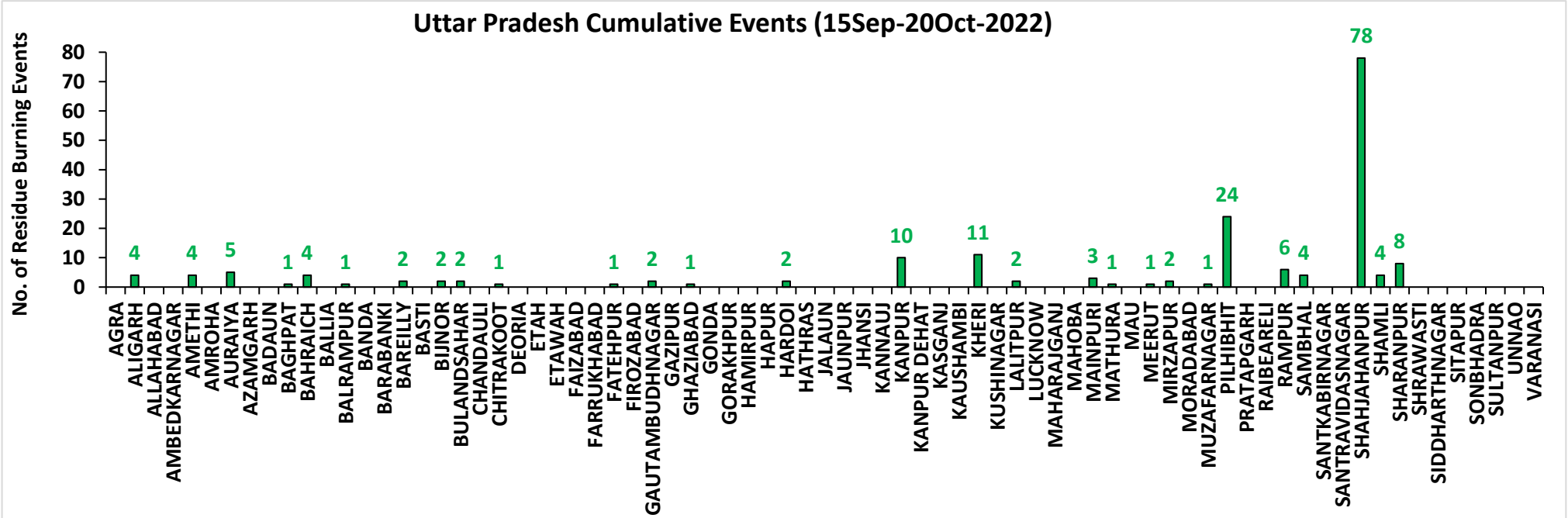
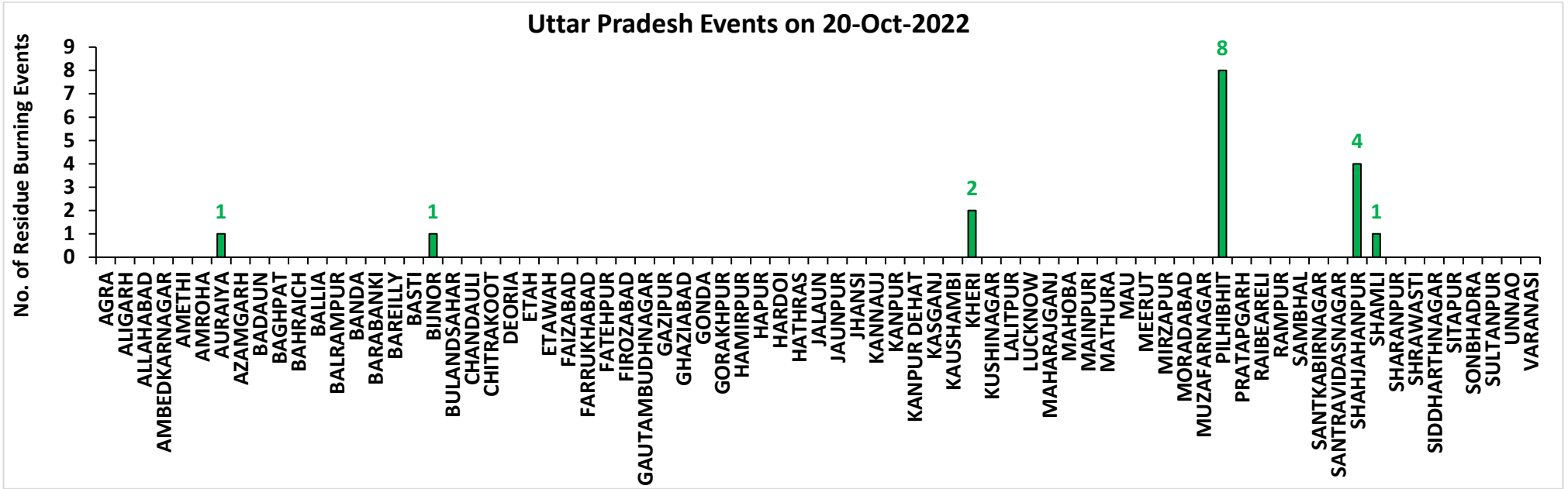
Fire Intensity (W/m²)

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



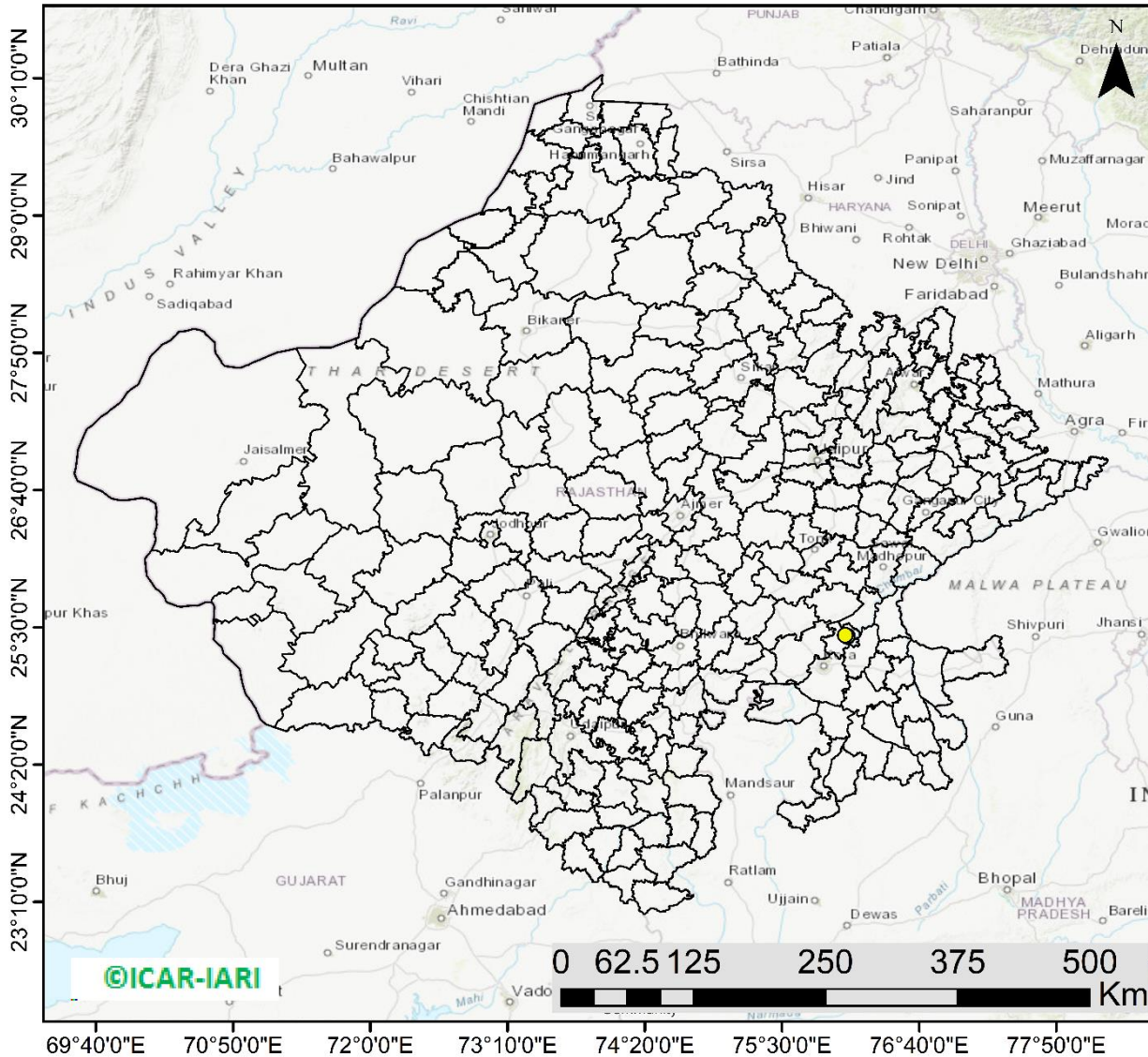
<http://geoportal.icar.gov.in:8080/geoplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep- 20Oct -2022)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



04 burning events
detected in Rajasthan on
(20th Oct 2022)

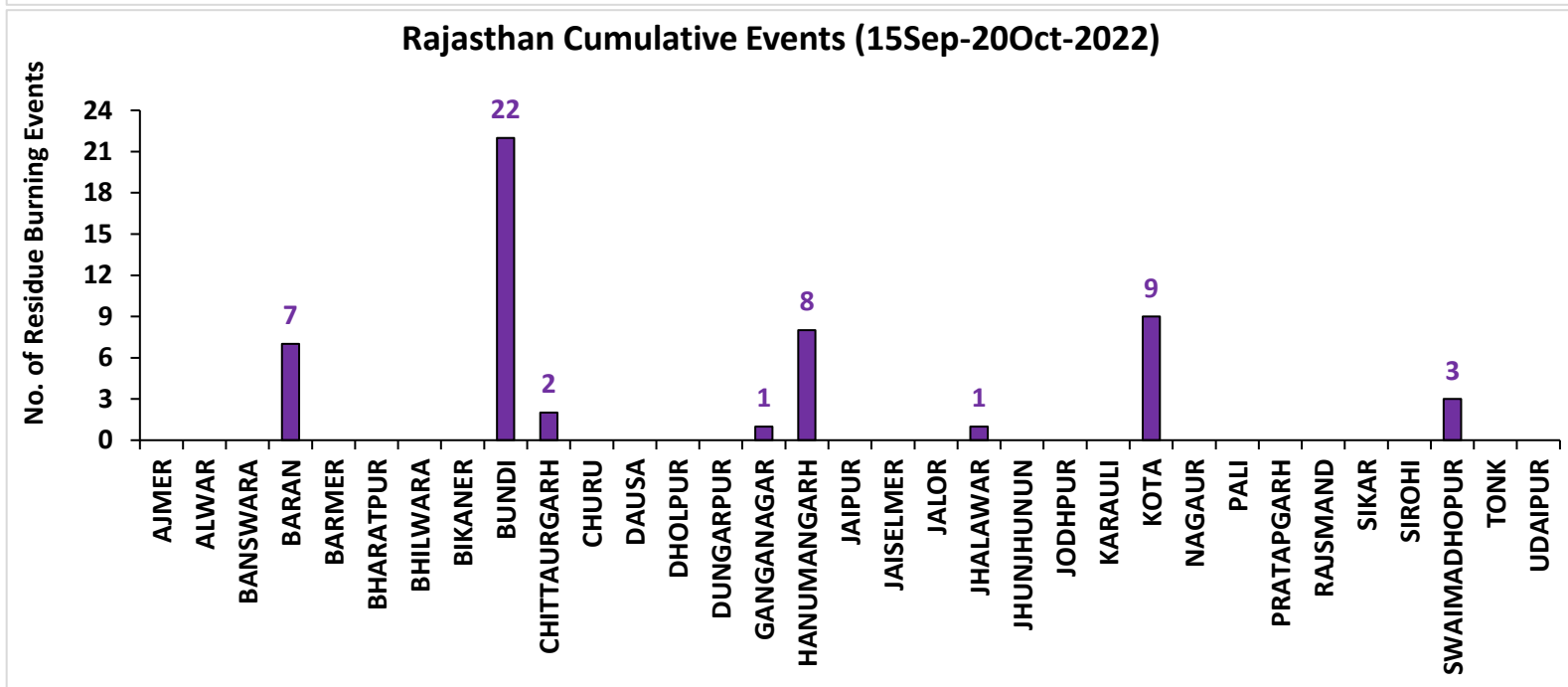
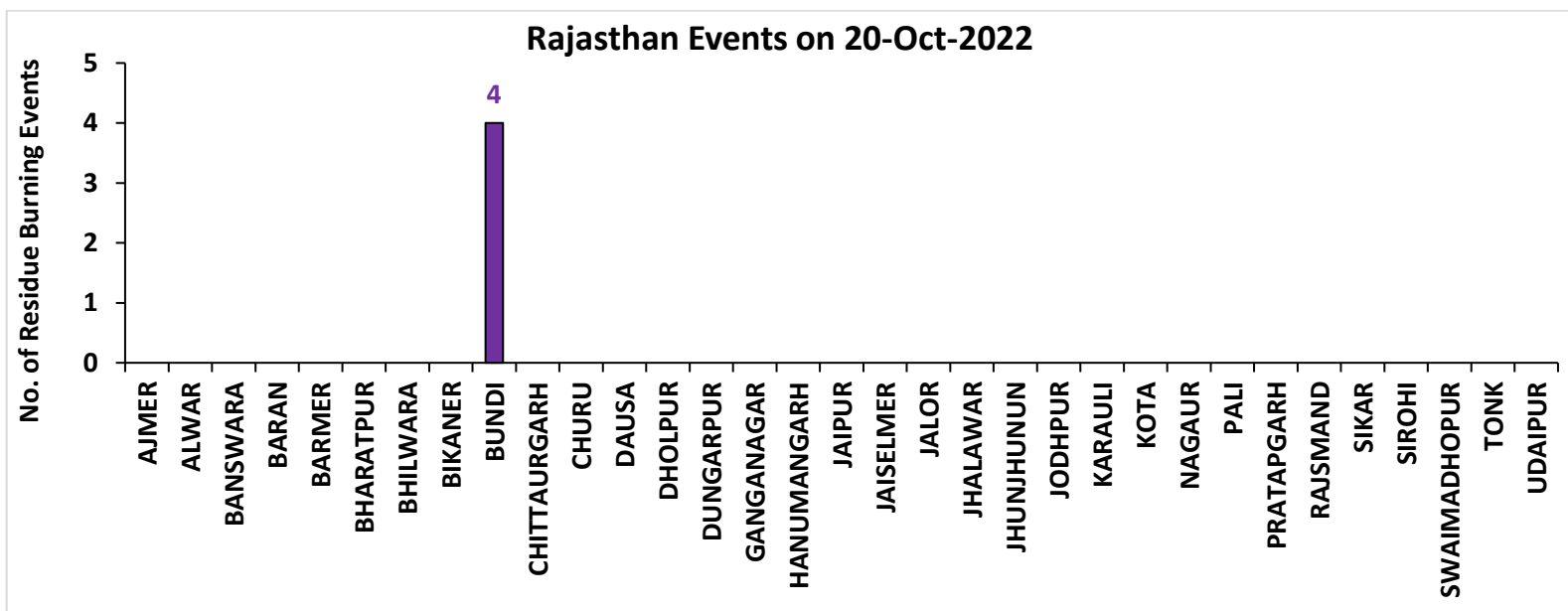
Fire Intensity (W/m²)

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



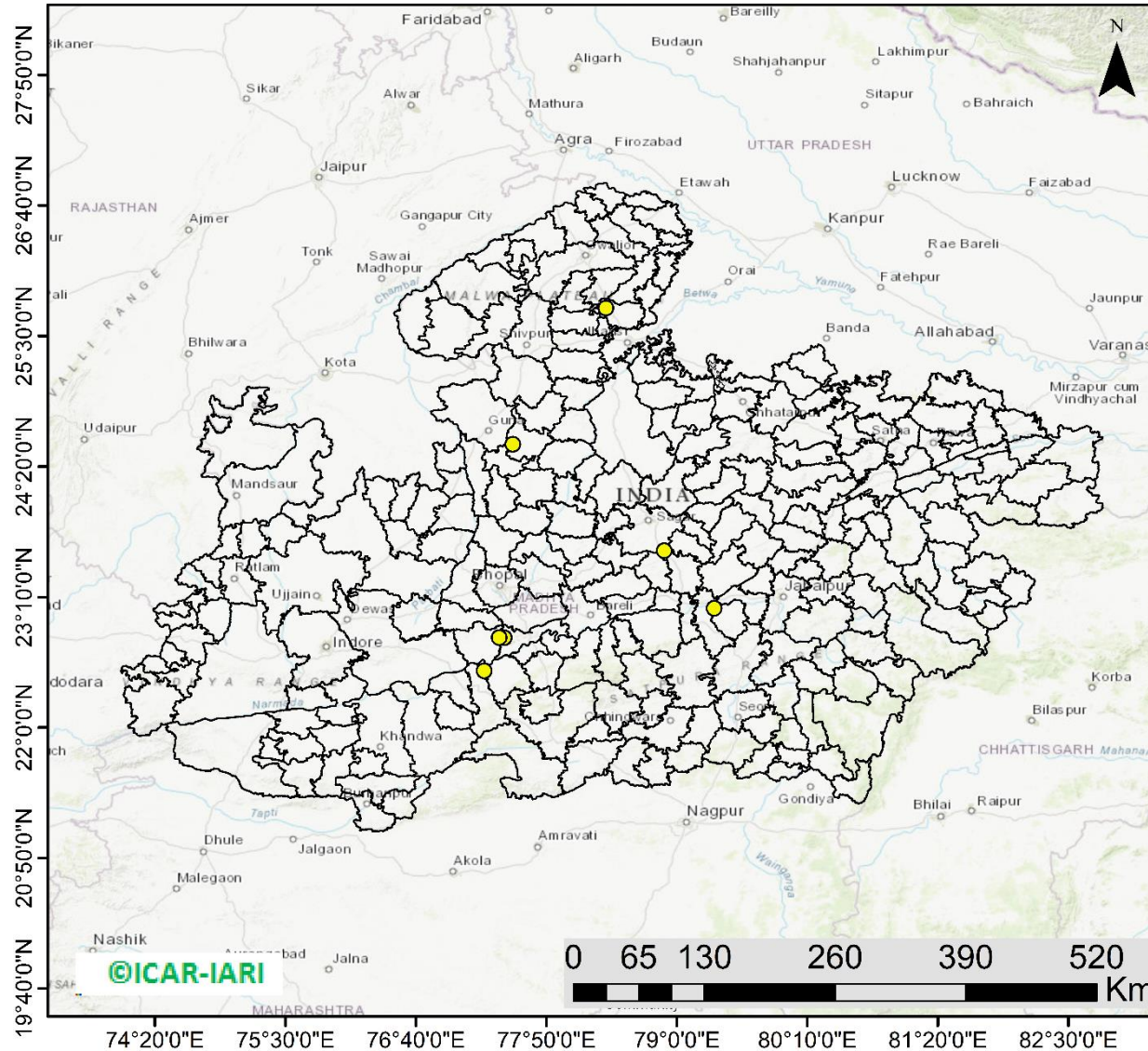
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15Sep- 20Oct -2022)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



07 burning events detected in MP on (20th Oct 2022)

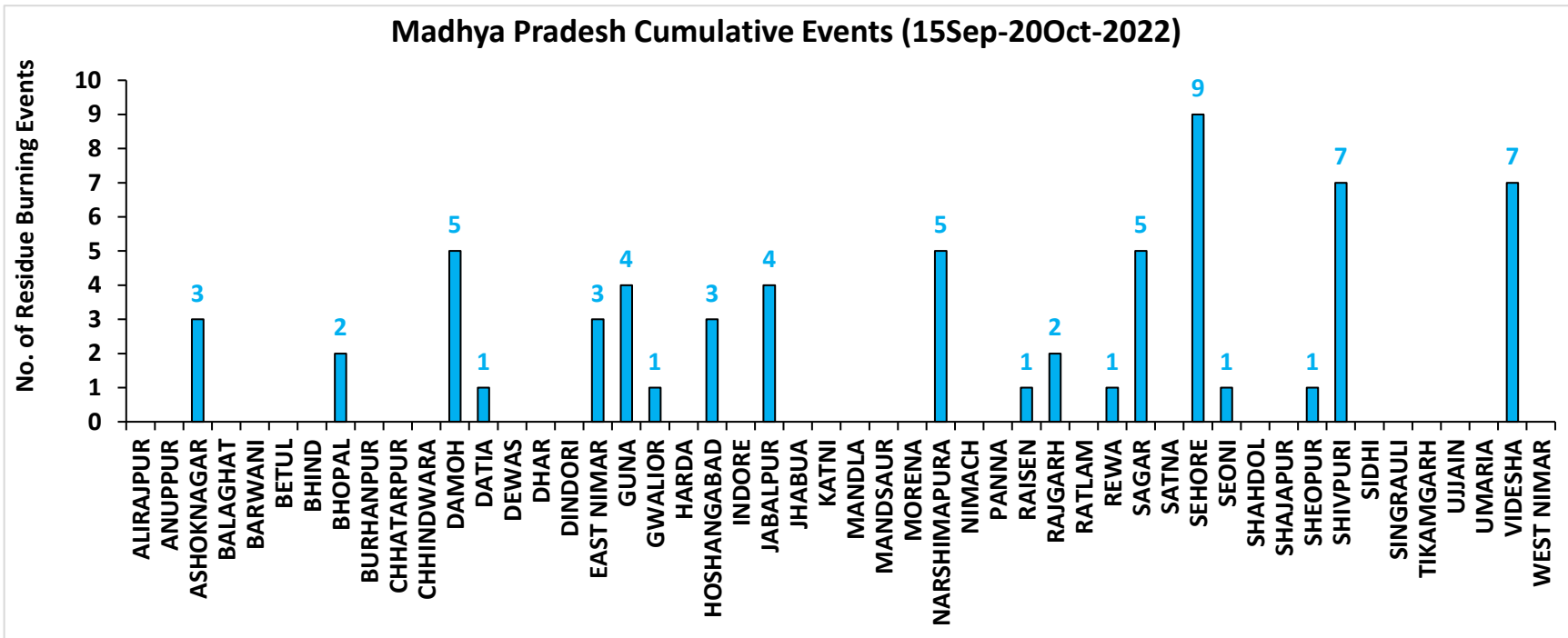
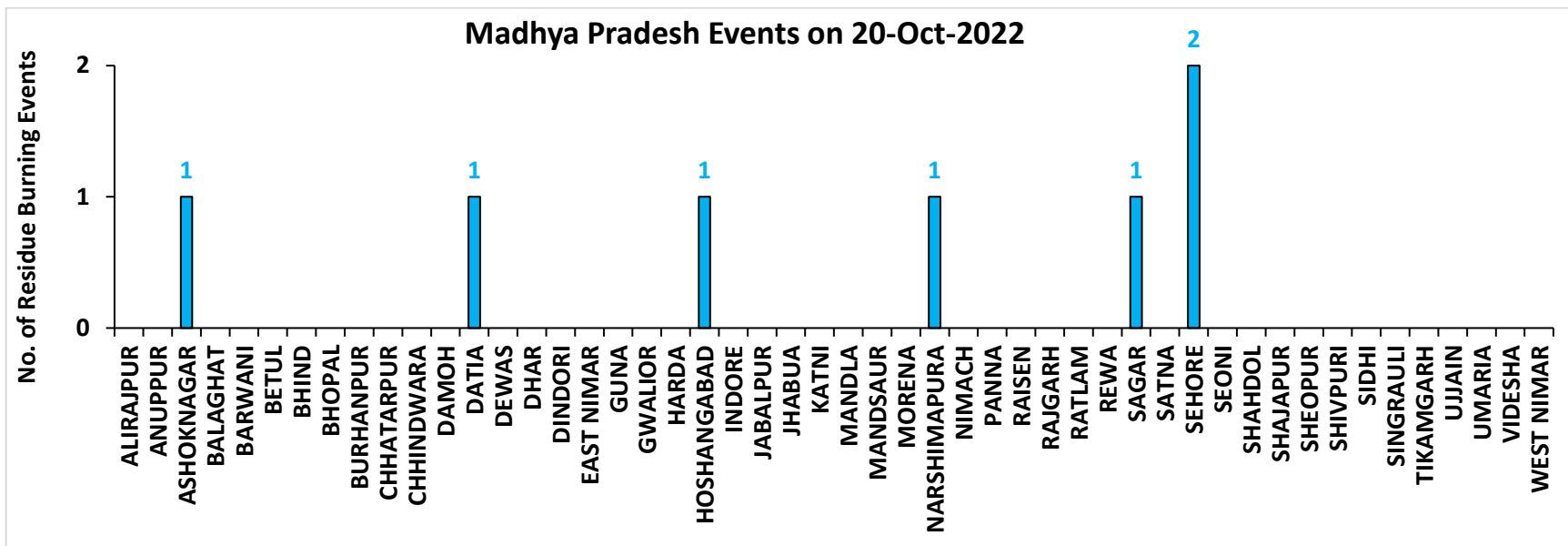
Fire Intensity (W/m²)

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



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

District-wise cumulative number of residues burning events in Madhya Pradesh (15Sep- 20Oct -2022)



District-wise cumulative number of residues burning events detected in 2020 ,2021 and 2022
(Period: 15 September-20 October)

(a) Punjab

| District | 15 Sep-20 Oct 2022 | | |
|-----------------------|--------------------|-------------|-------------|
| | 2020 | 2021 | 2022 |
| Amritsar | 2111 | 752 | 792 |
| Barnala | 28 | 29 | 13 |
| Bathinda | 113 | 33 | 14 |
| Faridkot | 459 | 151 | 14 |
| Fatehgarh Sahib | 238 | 152 | 55 |
| Fazilka | 116 | 56 | 23 |
| Firozpur | 1026 | 203 | 127 |
| Gurdaspur | 664 | 234 | 230 |
| Hoshiarpur | 81 | 27 | 4 |
| Jalandhar | 188 | 150 | 107 |
| Kapurthala | 435 | 172 | 142 |
| Ludhiana | 216 | 232 | 70 |
| Mansa | 77 | 12 | 17 |
| Moga | 129 | 76 | 52 |
| Muktsar | 94 | 49 | 5 |
| Pathankot | 4 | 0 | 0 |
| Patiala | 780 | 335 | 131 |
| Rupnagar | 46 | 27 | 8 |
| Sangrur | 210 | 71 | 81 |
| SAS NAGAR (Mohali) | 58 | 37 | 13 |
| SBS Nagar | 18 | 18 | 2 |
| Tarn Taran | 2308 | 914 | 821 |
| Total | 9399 | 3730 | 2721 |

(b) Haryana

| District | 15 Sep-20 Oct 2022 | | |
|---------------|--------------------|-------------|------------|
| | 2020 | 2021 | 2022 |
| AMBALA | 143 | 55 | 37 |
| BHIWANI | 0 | 0 | 0 |
| CHARKHI DADRI | 0 | 0 | 0 |
| FARIDABAD | 0 | 1 | 1 |
| FATEHABAD | 69 | 71 | 56 |
| GURGAON | 0 | 0 | 0 |
| HISAR | 9 | 2 | 10 |
| JHAJJAR | 1 | 0 | 0 |
| JIND | 34 | 51 | 55 |
| KAITHAL | 228 | 342 | 184 |
| KARNAL | 340 | 397 | 117 |
| KURUKSHETRA | 266 | 216 | 141 |
| MAHENDRAGARH | 0 | 0 | 0 |
| MEWAT | 0 | 0 | 0 |
| PALWAL | 19 | 25 | 4 |
| PANCHKULA | 0 | 0 | 0 |
| PANIPAT | 10 | 16 | 11 |
| REWARI | 0 | 0 | 0 |
| ROHTAK | 1 | 0 | 0 |
| SIRSA | 21 | 10 | 8 |
| SONIPAT | 12 | 5 | 6 |
| YAMUNANAGAR | 72 | 46 | 34 |
| Total | 1225 | 1237 | 664 |

(c) Uttar Pradesh

| District | 15 Sep-20 Oct 2022 | | | | | | | | | | |
|---------------|--------------------|------|------|-----------------|----|----|----|------------------|------------|------------|------------|
| | 2020 | 2021 | 2022 | GAUTAMBUDHNAGAR | 2 | 7 | 2 | MUZAFARNAGAR | 3 | 2 | 1 |
| AGRA | 2 | 0 | 0 | GAZIPUR | 0 | 0 | 0 | PILHIBHIT | 8 | 108 | 24 |
| ALIGARH | 38 | 21 | 4 | GHAZIABAD | 3 | 2 | 1 | PRATAPGARH | 1 | 0 | 0 |
| ALLAHABAD | 0 | 1 | 0 | GONDA | 0 | 0 | 0 | RAIBEARELI | 1 | 0 | 0 |
| AMBEDKARNAGAR | 0 | 0 | 0 | GORAKHPUR | 1 | 0 | 0 | RAMPUR | 35 | 50 | 6 |
| AMETHI | 0 | 1 | 4 | HAMIRPUR | 1 | 0 | 0 | SAMBHAL | 7 | 7 | 4 |
| AMROHA | 1 | 0 | 0 | HAPUR | 3 | 1 | 0 | SANTKABIRNAGAR | 0 | 0 | 0 |
| AURAIYA | 17 | 6 | 5 | HARDOI | 13 | 6 | 2 | SANTRAVIDASNAGAR | 0 | 0 | 0 |
| AZAMGARH | 0 | 0 | 0 | HATHRAS | 0 | 0 | 0 | SHAHJAHANPUR | 47 | 181 | 78 |
| BADAUN | 1 | 6 | 0 | JALAUN | 0 | 0 | 0 | SHAMLI | 20 | 11 | 4 |
| BAGHPAT | 3 | 1 | 1 | JAUNPUR | 0 | 0 | 0 | SHARANPUR | 33 | 17 | 8 |
| BAHRAICH | 9 | 2 | 4 | JHANSI | 10 | 6 | 0 | SHRAWASTI | 7 | 0 | 0 |
| BALLIA | 0 | 0 | 0 | KANNAUJ | 3 | 1 | 0 | SIDDHARTHANAGAR | 0 | 0 | 0 |
| BALRAMPUR | 1 | 1 | 1 | KANPUR | 3 | 7 | 10 | SITAPUR | 14 | 9 | 0 |
| BANDA | 0 | 0 | 0 | KANPUR DEHAT | 11 | 1 | 0 | SONBHADRA | 0 | 0 | 0 |
| BARABANKI | 15 | 20 | 0 | KASGANJ | 2 | 2 | 0 | SULTANPUR | 0 | 0 | 0 |
| BAREILLY | 19 | 15 | 2 | KAUSHAMBI | 9 | 3 | 0 | UNNAO | 5 | 0 | 0 |
| BASTI | 3 | 1 | 0 | KHERI | 44 | 54 | 11 | VARANASI | 1 | 0 | 0 |
| BIJNOR | 6 | 3 | 2 | KUSHINAGAR | 0 | 0 | 0 | Total | 529 | 626 | 187 |
| BULANDSAHAR | 15 | 2 | 2 | LALITPUR | 0 | 1 | 2 | | | | |
| CHANDAULI | 0 | 0 | 0 | LUCKNOW | 2 | 0 | 0 | | | | |
| CHITRAKOOT | 0 | 1 | 1 | MAHARAJGANJ | 0 | 0 | 0 | | | | |
| DEORIA | 0 | 0 | 0 | MAHOBA | 3 | 0 | 0 | | | | |
| ETAH | 8 | 6 | 0 | MAINPURI | 11 | 7 | 3 | | | | |
| ETAWAH | 5 | 7 | 0 | MATHURA | 31 | 27 | 1 | | | | |
| FAIZABAD | 1 | 0 | 0 | MAU | 0 | 0 | 0 | | | | |
| FARRUKHABAD | 0 | 0 | 0 | MEERUT | 12 | 4 | 1 | | | | |
| FATEHPUR | 18 | 6 | 1 | MIRZAPUR | 6 | 5 | 2 | | | | |
| FIROZABAD | 10 | 4 | 0 | MORADABAD | 5 | 3 | 0 | | | | |

(d) Delhi

| District | 15 Sep-20 Oct 2022 | | |
|------------------|--------------------|----------|----------|
| | 2020 | 2021 | 2022 |
| CENTRAL | 0 | 0 | 0 |
| EAST | 0 | 0 | 0 |
| NEW DELHI | 0 | 0 | 0 |
| NORTH | 2 | 0 | 3 |
| NORTH EAST | 0 | 0 | 0 |
| NORTH WEST DELHI | 1 | 0 | 0 |
| SHAHADRA | 0 | 0 | 0 |
| SOUTH | 1 | 0 | 0 |
| SOUTH EAST | 0 | 0 | 0 |
| SOUTH WEST DELHI | 0 | 0 | 0 |
| WEST DELHI | 0 | 0 | 0 |
| Total | 4 | 0 | 3 |

(e) Rajasthan

| District | 15 Sep-20 Oct 2022 | | |
|--------------|--------------------|-----------|-----------|
| | 2020 | 2021 | 2022 |
| AJMER | 0 | 0 | 0 |
| ALWAR | 1 | 0 | 0 |
| BANSWARA | 0 | 0 | 0 |
| BARAN | 88 | 0 | 7 |
| BARMER | 2 | 0 | 0 |
| BHARATPUR | 2 | 0 | 0 |
| BHILWARA | 2 | 0 | 0 |
| BIKANER | 1 | 0 | 0 |
| BUNDI | 11 | 0 | 22 |
| CHITTAURGARH | 0 | 2 | 2 |
| CHURU | 0 | 0 | 0 |
| DAUSA | 0 | 0 | 0 |
| DHOLPUR | 0 | 0 | 0 |
| DUNGARPUR | 0 | 0 | 0 |
| GANGANAGAR | 3 | 0 | 1 |
| HANUMANGARH | 170 | 35 | 8 |
| JAIPUR | 1 | 0 | 0 |
| JAISELMER | 2 | 0 | 0 |
| JALOR | 0 | 0 | 0 |
| JHALAWAR | 1 | 0 | 1 |
| JHUNJHUNUN | 1 | 0 | 0 |
| JODHPUR | 1 | 0 | 0 |
| KARAULI | 1 | 0 | 0 |
| KOTA | 27 | 1 | 9 |
| NAGAUR | 0 | 0 | 0 |
| PALI | 1 | 0 | 0 |
| PRATAPGARH | 4 | 0 | 0 |
| RAJSMAND | 0 | 0 | 0 |
| SIKAR | 0 | 0 | 0 |
| SIROHI | 1 | 0 | 0 |
| SWAIMADHOPUR | 8 | 0 | 3 |
| TONK | 2 | 0 | 0 |
| UDAIPUR | 0 | 0 | 0 |
| Total | 330 | 38 | 53 |

(f) Madhya Pradesh

| District | 15 Sep-20 Oct 2022 | | | | | | |
|--------------|--------------------|------|------|--------------|------------|------------|-----------|
| | 2020 | 2021 | 2022 | | | | |
| | | | | PANNA | 3 | 0 | 0 |
| ALIRAJPUR | 0 | 0 | 0 | RAISEN | 18 | 2 | 1 |
| ANUPPUR | 0 | 0 | 0 | RAJGARH | 7 | 1 | 3 |
| ASHOKNAGAR | 19 | 1 | 3 | RATLAM | 0 | 0 | 0 |
| BALAGHAT | 0 | 0 | 0 | REWA | 4 | 0 | 1 |
| BARWANI | 0 | 0 | 0 | SAGAR | 15 | 9 | 5 |
| BETUL | 1 | 0 | 0 | SATNA | 11 | 6 | 0 |
| BHIND | 9 | 1 | 0 | SEHORE | 9 | 3 | 9 |
| BHOPAL | 6 | 5 | 2 | SEONI | 37 | 15 | 1 |
| BURHANPUR | 0 | 0 | 0 | SHAHDOL | 0 | 0 | 0 |
| CHHATARPUR | 4 | 0 | 0 | SHAJAPUR | 5 | 0 | 0 |
| CHHINDWARA | 4 | 5 | 0 | SHEOPUR | 16 | 0 | 1 |
| DAMOH | 20 | 4 | 5 | SHIVPURI | 9 | 0 | 7 |
| DATIA | 77 | 8 | 1 | SIDHI | 0 | 0 | 0 |
| DEWAS | 3 | 0 | 0 | SINGRAULI | 0 | 0 | 0 |
| DHAR | 21 | 0 | 0 | TIKAMGARH | 1 | 0 | 0 |
| DINDORI | 0 | 0 | 0 | UJJAIN | 5 | 0 | 0 |
| EAST NIMAR | 2 | 1 | 3 | UMARIA | 0 | 0 | 0 |
| GUNA | 16 | 2 | 4 | VIDESHA | 60 | 8 | 7 |
| GWALIOR | 48 | 0 | 1 | WEST NIMAR | 6 | 0 | 0 |
| HARDA | 8 | 10 | 0 | Total | 530 | 106 | 65 |
| HOSHANGABAD | 38 | 8 | 3 | | | | |
| INDORE | 2 | 0 | 0 | | | | |
| JABALPUR | 12 | 4 | 3 | | | | |
| JHABUA | 0 | 0 | 0 | | | | |
| KATNI | 3 | 0 | 0 | | | | |
| MANDLA | 1 | 0 | 0 | | | | |
| MANDSAUR | 3 | 0 | 0 | | | | |
| MORENA | 18 | 5 | 0 | | | | |
| NARSHIMAPURA | 9 | 8 | 5 | | | | |
| NIMACH | 0 | 0 | 0 | | | | |

State-wise and date-wise number of paddy residue burning events detected in 2020, 2021 and 2022
(Period: 15 September - 20 October 2022)

Number of Paddy Residue Burning Events Detected

| | Punjab | | | Haryana | | | Uttar Pradesh | | | Delhi | | | Rajasthan | | | Madhya Pradesh | | |
|--------|--------|------|------|---------|------|------|---------------|------|------|-------|------|------|-----------|------|------|----------------|------|------|
| | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 | 2020 | 2021 | 2022 |
| 15-Sep | 5 | 0 | 14 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 |
| 16-Sep | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17-Sep | 5 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18-Sep | 17 | 9 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19-Sep | 30 | 5 | 18 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20-Sep | 67 | 8 | 10 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21-Sep | 54 | 0 | 56 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 0 |
| 22-Sep | 34 | 0 | 30 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23-Sep | 49 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 24-Sep | 78 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25-Sep | 184 | 11 | 0 | 11 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 26-Sep | 190 | 19 | 0 | 5 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 |
| 27-Sep | 78 | 37 | 0 | 8 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 28-Sep | 55 | 28 | 0 | 6 | 1 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 29-Sep | 63 | 64 | 0 | 9 | 4 | 0 | 6 | 10 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 4 | 0 |
| 30-Sep | 116 | 27 | 8 | 22 | 2 | 0 | 13 | 13 | 10 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| 01-Oct | 165 | 13 | 45 | 15 | 4 | 1 | 7 | 13 | 3 | 0 | 0 | 0 | 4 | 1 | 1 | 13 | 0 | 1 |
| 02-Oct | 141 | 0 | 83 | 30 | 2 | 7 | 12 | 0 | 36 | 1 | 0 | 0 | 7 | 0 | 3 | 12 | 0 | 1 |
| 03-Oct | 110 | 9 | 75 | 8 | 6 | 8 | 4 | 3 | 29 | 0 | 0 | 0 | 9 | 0 | 2 | 5 | 1 | 5 |
| 04-Oct | 162 | 23 | 65 | 29 | 2 | 7 | 8 | 0 | 2 | 0 | 0 | 0 | 15 | 0 | 0 | 4 | 2 | 0 |
| 05-Oct | 161 | 18 | 130 | 17 | 3 | 24 | 14 | 2 | 0 | 0 | 0 | 2 | 14 | 0 | 1 | 13 | 1 | 0 |
| 06-Oct | 171 | 42 | 85 | 30 | 0 | 26 | 12 | 1 | 0 | 1 | 0 | 0 | 16 | 0 | 0 | 37 | 1 | 0 |
| 07-Oct | 197 | 72 | 62 | 32 | 11 | 6 | 41 | 13 | 0 | 0 | 0 | 0 | 14 | 1 | 1 | 31 | 1 | 0 |
| 08-Oct | 95 | 108 | 19 | 29 | 27 | 0 | 25 | 11 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 17 | 2 | 0 |

| | | | | | | | | | | | | | | | | | | |
|---------------|-------------|-------------|-------------|-------------|-------------|------------|------------|------------|------------|----------|----------|----------|------------|-----------|-----------|------------|------------|-----------|
| 09-Oct | 121 | 114 | 3 | 20 | 39 | 1 | 15 | 20 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 15 | 4 | 0 |
| 10-Oct | 232 | 150 | 4 | 33 | 95 | 2 | 9 | 54 | 0 | 0 | 0 | 0 | 14 | 1 | 0 | 18 | 10 | 0 |
| 11-Oct | 377 | 64 | 45 | 90 | 51 | 0 | 23 | 28 | 0 | 0 | 0 | 0 | 21 | 7 | 1 | 32 | 2 | 0 |
| 12-Oct | 388 | 97 | 104 | 69 | 51 | 4 | 46 | 23 | 0 | 0 | 0 | 0 | 24 | 1 | 2 | 44 | 1 | 1 |
| 13-Oct | 266 | 132 | 120 | 47 | 91 | 15 | 36 | 42 | 0 | 0 | 0 | 0 | 7 | 5 | 2 | 21 | 2 | 7 |
| 14-Oct | 605 | 229 | 82 | 69 | 98 | 30 | 9 | 68 | 11 | 0 | 0 | 0 | 16 | 1 | 1 | 15 | 11 | 1 |
| 15-Oct | 449 | 660 | 169 | 106 | 363 | 36 | 15 | 149 | 0 | 0 | 0 | 0 | 9 | 8 | 2 | 8 | 27 | 2 |
| 16-Oct | 654 | 429 | 206 | 80 | 176 | 76 | 21 | 121 | 6 | 1 | 0 | 0 | 12 | 2 | 4 | 23 | 13 | 2 |
| 17-Oct | 1172 | 14 | 403 | 143 | 0 | 86 | 38 | 39 | 7 | 0 | 0 | 0 | 26 | 0 | 4 | 63 | 1 | 11 |
| 18-Oct | 938 | 57 | 342 | 166 | 1 | 134 | 76 | 0 | 30 | 0 | 0 | 1 | 37 | 2 | 12 | 88 | 0 | 15 |
| 19-Oct | 1080 | 496 | 436 | 72 | 55 | 122 | 43 | 5 | 36 | 0 | 0 | 0 | 27 | 5 | 12 | 49 | 1 | 12 |
| 20-Oct | 890 | 788 | 96 | 62 | 155 | 78 | 31 | 1 | 17 | 0 | 0 | 0 | 26 | 4 | 4 | 9 | 21 | 7 |
| Total | 9399 | 3730 | 2721 | 1225 | 1237 | 664 | 529 | 626 | 187 | 4 | 0 | 3 | 330 | 38 | 53 | 530 | 106 | 65 |

Details of residue burning events in Punjab on 20-Oct-2022

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_TIME | Day / Night | Fire Power (W/m2) |
|--------|-----------------|-----------------|-----------|----------|-----------|----------|-------------|-------------------|
| 1 | AMRITSAR | AJNALA | S-NPP | 31.94820 | 74.91720 | 14:25:59 | D | 7.20 |
| 2 | AMRITSAR | AJNALA | S-NPP | 31.95050 | 74.92010 | 14:25:59 | D | 10.00 |
| 3 | AMRITSAR | MAJITHA | S-NPP | 31.68890 | 75.02600 | 14:25:59 | D | 4.60 |
| 4 | AMRITSAR | TARSIKKA | S-NPP | 31.72500 | 75.16610 | 14:25:59 | D | 2.80 |
| 5 | BATHINDA | GONIANA MANDI | S-NPP | 30.25760 | 74.88190 | 12:45:41 | D | 2.70 |
| 6 | BATHINDA | TALWANDI SABO | S-NPP | 29.80720 | 75.13840 | 12:45:41 | D | 10.20 |
| 7 | BATHINDA | TALWANDI SABO | S-NPP | 29.83390 | 75.13490 | 12:45:41 | D | 5.10 |
| 8 | BATHINDA | TALWANDI SABO | S-NPP | 29.84150 | 75.14740 | 14:25:59 | D | 11.20 |
| 9 | BATHINDA | TALWANDI SABO | S-NPP | 29.84320 | 75.14450 | 14:25:59 | D | 14.80 |
| 10 | BATHINDA | TALWANDI SABO | S-NPP | 29.98460 | 75.00920 | 14:25:59 | D | 8.10 |
| 11 | FATEHGARH SAHIB | BASSI PATHANAN | S-NPP | 30.67800 | 76.45290 | 12:45:41 | D | 3.70 |
| 12 | FATEHGARH SAHIB | BASSI PATHANAN | S-NPP | 30.68120 | 76.45330 | 12:45:41 | D | 3.20 |
| 13 | FATEHGARH SAHIB | BASSI PATHANAN | S-NPP | 30.72530 | 76.52530 | 14:25:59 | D | 6.10 |
| 14 | FATEHGARH SAHIB | BASSI PATHANAN | S-NPP | 30.74800 | 76.45320 | 12:45:41 | D | 2.00 |
| 15 | FATEHGARH SAHIB | SIRHIND | S-NPP | 30.57990 | 76.27560 | 12:45:41 | D | 2.10 |
| 16 | FATEHGARH SAHIB | SIRHIND | S-NPP | 30.58700 | 76.44200 | 12:45:41 | D | 7.30 |
| 17 | FATEHGARH SAHIB | SIRHIND | S-NPP | 30.58880 | 76.42670 | 12:45:41 | D | 2.10 |
| 18 | FATEHGARH SAHIB | SIRHIND | S-NPP | 30.59710 | 76.43890 | 12:45:41 | D | 2.10 |
| 19 | FAZILKA | FAZILKA | S-NPP | 30.50170 | 73.98620 | 12:45:41 | D | 8.00 |
| 20 | FAZILKA | FAZILKA | S-NPP | 30.50290 | 73.99100 | 12:45:41 | D | 8.00 |
| 21 | FAZILKA | FAZILKA | S-NPP | 30.50460 | 73.98940 | 12:45:41 | D | 15.60 |
| 22 | FIROZPUR | FIROZPUR | S-NPP | 31.03580 | 74.56710 | 14:25:59 | D | 5.40 |
| 23 | FIROZPUR | FIROZPUR | S-NPP | 31.04180 | 74.68810 | 14:25:59 | D | 2.80 |
| 24 | FIROZPUR | GURUHAR SAHAI | S-NPP | 30.63710 | 74.30090 | 14:25:59 | D | 4.30 |
| 25 | FIROZPUR | GURUHAR SAHAI | S-NPP | 30.74980 | 74.28170 | 14:25:59 | D | 4.80 |
| 26 | FIROZPUR | GURUHAR SAHAI | S-NPP | 30.76410 | 74.31520 | 14:25:59 | D | 2.80 |
| 27 | FIROZPUR | GURUHAR SAHAI | S-NPP | 30.76490 | 74.33750 | 12:45:41 | D | 2.70 |
| 28 | FIROZPUR | MAMDOT | S-NPP | 30.87090 | 74.37780 | 14:25:59 | D | 6.70 |
| 29 | GURDASPUR | BATALA | S-NPP | 31.77350 | 75.21050 | 14:25:59 | D | 3.70 |
| 30 | GURDASPUR | DERA BABA NANAK | S-NPP | 31.96390 | 74.97500 | 14:25:59 | D | 3.90 |

| | | | | | | | | |
|----|------------|-----------------|-------|----------|----------|----------|---|-------|
| 31 | HOSHIARPUR | GARH SHANKAR | S-NPP | 31.20760 | 76.10980 | 12:45:41 | D | 2.10 |
| 32 | JALANDHAR | LOHIAN | S-NPP | 31.18320 | 75.20390 | 14:25:59 | D | 5.70 |
| 33 | JALANDHAR | MEHATPUR | S-NPP | 31.00590 | 75.46150 | 12:45:41 | D | 3.40 |
| 34 | JALANDHAR | SHAHKOT | S-NPP | 31.12180 | 75.32660 | 14:25:59 | D | 6.90 |
| 35 | JALANDHAR | SHAHKOT | S-NPP | 31.12530 | 75.32290 | 14:25:59 | D | 7.80 |
| 36 | KAPURTHALA | NADALA | S-NPP | 31.48220 | 75.51220 | 14:25:59 | D | 7.10 |
| 37 | KAPURTHALA | NADALA | S-NPP | 31.57180 | 75.50540 | 14:25:59 | D | 8.40 |
| 38 | KAPURTHALA | NADALA | S-NPP | 31.59010 | 75.45600 | 14:25:59 | D | 5.30 |
| 39 | KAPURTHALA | SULTANPUR LODHI | S-NPP | 31.26410 | 75.12600 | 14:25:59 | D | 7.60 |
| 40 | LUDHIANA | LUDHIANA-2 | S-NPP | 31.01060 | 75.74990 | 12:45:41 | D | 3.30 |
| 41 | LUDHIANA | MACHHIWARA | S-NPP | 30.86590 | 76.11150 | 12:45:41 | D | 2.30 |
| 42 | LUDHIANA | MACHHIWARA | S-NPP | 30.87010 | 76.26550 | 12:45:41 | D | 3.40 |
| 43 | LUDHIANA | SAMRALA | S-NPP | 30.76590 | 76.22750 | 14:25:59 | D | 7.20 |
| 44 | LUDHIANA | SAMRALA | S-NPP | 30.76630 | 76.23500 | 14:25:59 | D | 7.20 |
| 45 | LUDHIANA | SAMRALA | S-NPP | 30.79140 | 76.23720 | 12:45:41 | D | 3.20 |
| 46 | LUDHIANA | SAMRALA | S-NPP | 30.81740 | 76.25540 | 12:45:41 | D | 3.60 |
| 47 | LUDHIANA | SAMRALA | AQUA | 30.75400 | 76.20600 | 14:27:01 | D | 35.60 |
| 48 | LUDHIANA | SAMRALA | AQUA | 30.76300 | 76.24000 | 14:27:01 | D | 31.20 |
| 49 | LUDHIANA | SIDHWAN BET | S-NPP | 30.91640 | 75.58260 | 12:45:41 | D | 8.50 |
| 50 | LUDHIANA | SIDHWAN BET | S-NPP | 30.91900 | 75.58100 | 12:45:41 | D | 4.40 |
| 51 | LUDHIANA | SIDHWAN BET | S-NPP | 30.91990 | 75.58480 | 12:45:41 | D | 4.40 |
| 52 | LUDHIANA | SUDHAR | S-NPP | 30.77730 | 75.69630 | 14:25:59 | D | 7.50 |
| 53 | MANSA | BUDHLADA | S-NPP | 29.81510 | 75.65440 | 14:25:59 | D | 8.50 |
| 54 | MANSA | SARDULGARH | S-NPP | 29.63020 | 75.27240 | 12:45:41 | D | 2.00 |
| 55 | MANSA | SARDULGARH | S-NPP | 29.66740 | 75.28390 | 14:25:59 | D | 4.70 |
| 56 | MOGA | MOGA-2 | S-NPP | 30.73530 | 75.06470 | 14:25:59 | D | 3.70 |
| 57 | PATIALA | BHUNARHERI | S-NPP | 30.17550 | 76.44480 | 12:45:41 | D | 3.50 |
| 58 | PATIALA | BHUNARHERI | S-NPP | 30.18060 | 76.44330 | 12:45:41 | D | 3.50 |
| 59 | PATIALA | BHUNARHERI | S-NPP | 30.23650 | 76.51970 | 12:45:41 | D | 2.80 |
| 60 | PATIALA | BHUNARHERI | S-NPP | 30.24160 | 76.46830 | 12:45:41 | D | 1.30 |
| 61 | PATIALA | NABHA | S-NPP | 30.41200 | 76.21810 | 12:45:41 | D | 3.10 |
| 62 | PATIALA | NABHA | S-NPP | 30.41250 | 76.21900 | 12:45:41 | D | 3.80 |
| 63 | PATIALA | PATRAN | S-NPP | 29.85480 | 76.13940 | 12:45:41 | D | 4.30 |

| | | | | | | | | |
|----|--------------------|------------------|-------|----------|----------|----------|---|-------|
| 64 | PATIALA | RAJPURA | S-NPP | 30.52790 | 76.73920 | 12:45:41 | D | 1.70 |
| 65 | PATIALA | RAJPURA | S-NPP | 30.57070 | 76.74950 | 12:45:41 | D | 5.60 |
| 66 | PATIALA | RAJPURA | S-NPP | 30.58900 | 76.60010 | 12:45:41 | D | 1.90 |
| 67 | PATIALA | SAMANA | S-NPP | 30.10210 | 76.22510 | 14:25:59 | D | 5.50 |
| 68 | PATIALA | SAMANA | S-NPP | 30.19780 | 76.17230 | 12:45:41 | D | 2.30 |
| 69 | PATIALA | SANAUR | S-NPP | 30.22810 | 76.29830 | 12:45:41 | D | 2.30 |
| 70 | PATIALA | SANAUR | S-NPP | 30.28110 | 76.47490 | 12:45:41 | D | 2.50 |
| 71 | RUPNAGAR | CHAMKAUR SAHIB | S-NPP | 30.87170 | 76.39480 | 12:45:41 | D | 3.30 |
| 72 | RUPNAGAR | CHAMKAUR SAHIB | S-NPP | 30.91580 | 76.36630 | 12:45:41 | D | 2.80 |
| 73 | SANGRUR | ANDANA | S-NPP | 29.80220 | 76.01510 | 12:45:41 | D | 4.70 |
| 74 | SANGRUR | ANDANA | S-NPP | 29.80310 | 76.01890 | 12:45:41 | D | 5.90 |
| 75 | SANGRUR | ANDANA | S-NPP | 29.80470 | 76.01680 | 12:45:41 | D | 7.50 |
| 76 | SANGRUR | ANDANA | S-NPP | 29.85920 | 76.04180 | 12:45:41 | D | 3.80 |
| 77 | SANGRUR | BHAWANIGARH | S-NPP | 30.21650 | 75.94820 | 12:45:41 | D | 2.70 |
| 78 | SANGRUR | MALERKOTLA-2 | S-NPP | 30.54160 | 75.75200 | 12:45:41 | D | 4.10 |
| 79 | SANGRUR | SUNAM | S-NPP | 30.05830 | 75.86110 | 14:25:59 | D | 7.00 |
| 80 | SANGRUR | SUNAM | S-NPP | 30.10770 | 75.82380 | 12:45:41 | D | 2.60 |
| 81 | SAS NAGAR (MOHALI) | DERABASSI | S-NPP | 30.55220 | 76.78350 | 12:45:41 | D | 3.50 |
| 82 | SAS NAGAR (MOHALI) | DERABASSI | S-NPP | 30.58150 | 76.79570 | 12:45:41 | D | 3.00 |
| 83 | TARN TARAN | BHIKHIWIND | S-NPP | 31.28730 | 74.65600 | 14:25:59 | D | 8.40 |
| 84 | TARN TARAN | BHIKHIWIND | S-NPP | 31.28800 | 74.65590 | 14:25:59 | D | 7.20 |
| 85 | TARN TARAN | CHOHLA SAHIB | S-NPP | 31.26660 | 75.03460 | 14:25:59 | D | 4.50 |
| 86 | TARN TARAN | CHOHLA SAHIB | S-NPP | 31.27620 | 75.03320 | 12:45:41 | D | 5.30 |
| 87 | TARN TARAN | KHADUR SAHIB | S-NPP | 31.44140 | 75.17520 | 14:25:59 | D | 3.60 |
| 88 | TARN TARAN | KHADUR SAHIB | S-NPP | 31.44340 | 75.17620 | 14:25:59 | D | 3.30 |
| 89 | TARN TARAN | KHADUR SAHIB | S-NPP | 31.46790 | 75.17380 | 14:25:59 | D | 10.00 |
| 90 | TARN TARAN | NAUSHERA PANNUAN | S-NPP | 31.38700 | 74.98230 | 14:25:59 | D | 6.00 |
| 91 | TARN TARAN | NAUSHERA PANNUAN | S-NPP | 31.43020 | 74.91570 | 14:25:59 | D | 4.90 |
| 92 | TARN TARAN | TARN TARAN | S-NPP | 31.43070 | 74.91700 | 14:25:59 | D | 6.50 |
| 93 | TARN TARAN | TARN TARAN | S-NPP | 31.43670 | 74.91540 | 14:25:59 | D | 8.20 |
| 94 | TARN TARAN | VALTOHA | S-NPP | 31.17690 | 74.54300 | 14:25:59 | D | 6.50 |
| 95 | TARN TARAN | VALTOHA | S-NPP | 31.22920 | 74.52580 | 14:25:59 | D | 4.80 |
| 96 | TARN TARAN | VALTOHA | S-NPP | 31.28920 | 74.57100 | 12:45:41 | D | 4.10 |

Details of residue burning events in Haryana on 20-Oct-2022

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_TIME | Day / Night | Fire Power (W/m2) |
|--------|-----------|----------------|-----------|----------|-----------|----------|-------------|-------------------|
| 1 | AMBALA | AMBALA-II | S-NPP | 30.21480 | 76.79290 | 12:45:41 | D | 2.10 |
| 2 | AMBALA | AMBALA-II | S-NPP | 30.21650 | 76.79370 | 12:45:41 | D | 2.50 |
| 3 | FATEHABAD | FATEHABAD | S-NPP | 29.45270 | 75.48790 | 14:25:59 | D | 3.50 |
| 4 | FATEHABAD | FATEHABAD | S-NPP | 29.45600 | 75.48480 | 14:25:59 | D | 4.70 |
| 5 | FATEHABAD | JAKHAL | S-NPP | 29.82070 | 75.77670 | 14:25:59 | D | 9.30 |
| 6 | FATEHABAD | RATIA | S-NPP | 29.63570 | 75.36510 | 12:45:41 | D | 5.10 |
| 7 | FATEHABAD | RATIA | S-NPP | 29.63710 | 75.36650 | 12:45:41 | D | 3.70 |
| 8 | FATEHABAD | TOHANA | S-NPP | 29.66490 | 75.81280 | 12:45:41 | D | 3.60 |
| 9 | FATEHABAD | TOHANA | S-NPP | 29.67330 | 75.73000 | 12:45:41 | D | 9.00 |
| 10 | HISAR | UKLANA | S-NPP | 29.55210 | 75.90280 | 12:45:41 | D | 2.80 |
| 11 | HISAR | UKLANA | S-NPP | 29.55420 | 75.90210 | 12:45:41 | D | 3.50 |
| 12 | JIND | ALEWA | S-NPP | 29.51050 | 76.44680 | 12:45:41 | D | 2.90 |
| 13 | JIND | NARWANA | S-NPP | 29.64410 | 75.94470 | 12:45:41 | D | 4.20 |
| 14 | JIND | SAFIDON | S-NPP | 29.39160 | 76.57230 | 12:45:41 | D | 4.10 |
| 15 | JIND | SAFIDON | S-NPP | 29.39180 | 76.57140 | 12:45:41 | D | 4.50 |
| 16 | JIND | UCHANA | S-NPP | 29.47360 | 76.22190 | 12:45:41 | D | 2.80 |
| 17 | KAITHAL | GUHLA | S-NPP | 29.96550 | 76.30160 | 12:45:41 | D | 5.40 |
| 18 | KAITHAL | GUHLA | S-NPP | 30.01520 | 76.28130 | 12:45:41 | D | 2.00 |
| 19 | KAITHAL | GUHLA | S-NPP | 30.02470 | 76.41290 | 12:45:41 | D | 2.80 |
| 20 | KAITHAL | GUHLA | S-NPP | 30.03580 | 76.41330 | 12:45:41 | D | 4.30 |
| 21 | KAITHAL | GUHLA | S-NPP | 30.04260 | 76.39590 | 12:45:41 | D | 14.50 |
| 22 | KAITHAL | GUHLA | S-NPP | 30.04860 | 76.37500 | 12:45:41 | D | 1.90 |
| 23 | KAITHAL | GUHLA | S-NPP | 30.08030 | 76.27580 | 12:45:41 | D | 2.50 |
| 24 | KAITHAL | GUHLA | S-NPP | 30.10240 | 76.30060 | 12:45:41 | D | 3.60 |
| 25 | KAITHAL | GUHLA | S-NPP | 30.10260 | 76.29980 | 12:45:41 | D | 3.60 |
| 26 | KAITHAL | GUHLA | S-NPP | 30.13250 | 76.40150 | 12:45:41 | D | 4.80 |
| 27 | KAITHAL | GUHLA | S-NPP | 30.17390 | 76.41510 | 12:45:41 | D | 2.90 |
| 28 | KAITHAL | KAITHAL | S-NPP | 29.82140 | 76.34490 | 12:45:41 | D | 9.90 |
| 29 | KAITHAL | PUNDRI | S-NPP | 29.68010 | 76.70110 | 12:45:41 | D | 5.80 |
| 30 | KAITHAL | PUNDRI | S-NPP | 29.70240 | 76.68480 | 14:25:59 | D | 3.80 |
| 31 | KAITHAL | PUNDRI | S-NPP | 29.70640 | 76.55810 | 12:45:41 | D | 2.20 |

| | | | | | | | | |
|----|-------------|------------|-------|----------|----------|----------|---|-------|
| 32 | KAITHAL | PUNDRI | S-NPP | 29.87720 | 76.67230 | 12:45:41 | D | 1.70 |
| 33 | KAITHAL | PUNDRI | S-NPP | 29.88550 | 76.54670 | 12:45:41 | D | 2.20 |
| 34 | KAITHAL | SIWAN | S-NPP | 29.90560 | 76.28130 | 12:45:41 | D | 5.30 |
| 35 | KAITHAL | SIWAN | S-NPP | 29.92180 | 76.23330 | 12:45:41 | D | 4.00 |
| 36 | KAITHAL | SIWAN | S-NPP | 29.92700 | 76.30190 | 12:45:41 | D | 6.70 |
| 37 | KAITHAL | SIWAN | S-NPP | 29.92790 | 76.30550 | 12:45:41 | D | 13.70 |
| 38 | KAITHAL | SIWAN | S-NPP | 29.99840 | 76.39430 | 12:45:41 | D | 2.00 |
| 39 | KARNAL | ASSANDH | S-NPP | 29.46570 | 76.58420 | 12:45:41 | D | 2.70 |
| 40 | KARNAL | ASSANDH | S-NPP | 29.55540 | 76.59020 | 12:45:41 | D | 5.30 |
| 41 | KARNAL | CHIRAO | S-NPP | 29.62490 | 76.90970 | 12:45:41 | D | 2.90 |
| 42 | KARNAL | CHIRAO | S-NPP | 29.63670 | 76.68200 | 12:45:41 | D | 1.60 |
| 43 | KARNAL | CHIRAO | S-NPP | 29.65600 | 76.88220 | 12:45:41 | D | 3.30 |
| 44 | KARNAL | CHIRAO | S-NPP | 29.65820 | 76.84520 | 12:45:41 | D | 0.90 |
| 45 | KARNAL | CHIRAO | S-NPP | 29.67720 | 76.75750 | 12:45:41 | D | 2.30 |
| 46 | KARNAL | CHIRAO | S-NPP | 29.70120 | 76.69840 | 12:45:41 | D | 1.70 |
| 47 | KARNAL | CHIRAO | S-NPP | 29.78080 | 76.72870 | 12:45:41 | D | 1.60 |
| 48 | KARNAL | GHARAUNDA | S-NPP | 29.47620 | 77.03070 | 12:45:41 | D | 1.00 |
| 49 | KARNAL | INDRI | S-NPP | 29.82690 | 77.05760 | 12:45:41 | D | 1.90 |
| 50 | KARNAL | INDRI | S-NPP | 29.88690 | 77.05810 | 14:25:59 | D | 5.90 |
| 51 | KARNAL | KARNAL | S-NPP | 29.80000 | 77.00940 | 12:45:41 | D | 6.70 |
| 52 | KARNAL | KARNAL | S-NPP | 29.80500 | 77.00790 | 12:45:41 | D | 6.70 |
| 53 | KARNAL | NILOKHERI | S-NPP | 29.78460 | 76.89610 | 12:45:41 | D | 4.10 |
| 54 | KURUKSHETRA | ISMAILABAD | S-NPP | 30.07860 | 76.73980 | 12:45:41 | D | 2.80 |
| 55 | KURUKSHETRA | ISMAILABAD | S-NPP | 30.08060 | 76.73780 | 12:45:41 | D | 3.30 |
| 56 | KURUKSHETRA | ISMAILABAD | S-NPP | 30.15530 | 76.66750 | 12:45:41 | D | 2.60 |
| 57 | KURUKSHETRA | ISMAILABAD | S-NPP | 30.15870 | 76.79710 | 12:45:41 | D | 2.20 |
| 58 | KURUKSHETRA | ISMAILABAD | S-NPP | 30.16770 | 76.67470 | 12:45:41 | D | 1.60 |
| 59 | KURUKSHETRA | PEHOWA | S-NPP | 29.94810 | 76.52840 | 12:45:41 | D | 3.20 |
| 60 | KURUKSHETRA | PEHOWA | S-NPP | 30.04720 | 76.53270 | 14:25:59 | D | 4.20 |
| 61 | KURUKSHETRA | PEHOWA | S-NPP | 30.09650 | 76.48530 | 12:45:41 | D | 2.60 |
| 62 | KURUKSHETRA | SHAHBAD | S-NPP | 30.15060 | 76.85320 | 12:45:41 | D | 2.00 |
| 63 | KURUKSHETRA | SHAHBAD | S-NPP | 30.20700 | 76.82170 | 12:45:41 | D | 4.10 |
| 64 | KURUKSHETRA | SHAHBAD | S-NPP | 30.21040 | 76.81930 | 12:45:41 | D | 3.50 |
| 65 | KURUKSHETRA | THANESAR | S-NPP | 29.92300 | 76.70630 | 12:45:41 | D | 3.60 |

| | | | | | | | | |
|----|-------------|------------|-------|----------|----------|----------|---|------|
| 66 | KURUKSHETRA | THANESAR | S-NPP | 29.99760 | 76.78270 | 12:45:41 | D | 4.60 |
| 67 | KURUKSHETRA | THANESAR | S-NPP | 30.01060 | 76.72410 | 12:45:41 | D | 5.60 |
| 68 | KURUKSHETRA | THANESAR | S-NPP | 30.01720 | 76.72940 | 12:45:41 | D | 6.60 |
| 69 | PALWAL | HATHIN | S-NPP | 28.01560 | 77.29210 | 12:45:41 | D | 2.30 |
| 70 | PALWAL | HATHIN | S-NPP | 28.01650 | 77.29050 | 12:45:41 | D | 2.10 |
| 71 | PALWAL | HODAL | S-NPP | 27.90000 | 77.45710 | 14:25:59 | D | 5.20 |
| 72 | PALWAL | HODAL | S-NPP | 27.90020 | 77.45490 | 14:25:59 | D | 6.90 |
| 73 | PANIPAT | MADLAUDA | S-NPP | 29.44640 | 76.85480 | 12:45:41 | D | 2.10 |
| 74 | PANIPAT | MADLAUDA | S-NPP | 29.44800 | 76.85480 | 12:45:41 | D | 2.10 |
| 75 | PANIPAT | PANIPAT | S-NPP | 29.46310 | 77.02030 | 12:45:41 | D | 1.70 |
| 76 | SIRSA | ODHAN | S-NPP | 29.85000 | 75.02570 | 14:25:59 | D | 7.80 |
| 77 | YAMUNANAGAR | BILASPUR | S-NPP | 30.24220 | 77.27000 | 12:45:41 | D | 5.40 |
| 78 | YAMUNANAGAR | MUSTAFABAD | S-NPP | 30.28430 | 77.25060 | 12:45:41 | D | 3.90 |

Details of residue burning events in Uttar Pradesh on 20-Oct-2022

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_TIME | Day / Night | Fire Power (W/m ²) |
|--------|--------------|----------------|-----------|----------|-----------|----------|-------------|--------------------------------|
| 1 | AURAIYA | BIDHUNA | S-NPP | 26.64360 | 79.47810 | 01:35:42 | N | 0.50 |
| 2 | BIJNOR | NAGINA | S-NPP | 29.66720 | 78.46460 | 12:45:41 | D | 3.90 |
| 3 | KHERI | MOHMADI | S-NPP | 27.89240 | 80.28130 | 12:45:41 | D | 4.60 |
| 4 | KHERI | MOHMADI | S-NPP | 27.93250 | 80.27260 | 12:45:41 | D | 5.70 |
| 5 | PILHIBHIT | BISALPUR | S-NPP | 28.13480 | 79.97630 | 12:45:41 | D | 6.20 |
| 6 | PILHIBHIT | PILHIBHIT | S-NPP | 28.81400 | 79.75400 | 01:35:42 | N | 0.40 |
| 7 | PILHIBHIT | PILHIBHIT | S-NPP | 28.82080 | 79.76390 | 12:45:41 | D | 3.40 |
| 8 | PILHIBHIT | PILHIBHIT | S-NPP | 28.86230 | 79.78800 | 12:45:41 | D | 3.30 |
| 9 | PILHIBHIT | PURANPUR | S-NPP | 28.33660 | 80.15520 | 12:45:41 | D | 2.70 |
| 10 | PILHIBHIT | PURANPUR | S-NPP | 28.34470 | 80.17250 | 12:45:41 | D | 2.40 |
| 11 | PILHIBHIT | PURANPUR | S-NPP | 28.34890 | 80.12760 | 12:45:41 | D | 3.40 |
| 12 | PILHIBHIT | PURANPUR | S-NPP | 28.35850 | 80.17380 | 12:45:41 | D | 3.30 |
| 13 | SHAHJAHANPUR | PUWANYA | S-NPP | 28.21550 | 80.14510 | 12:45:41 | D | 5.60 |
| 14 | SHAHJAHANPUR | PUWANYA | S-NPP | 28.28360 | 80.05840 | 12:45:41 | D | 3.50 |
| 15 | SHAHJAHANPUR | PUWANYA | S-NPP | 28.33220 | 80.11250 | 12:45:41 | D | 6.90 |
| 16 | SHAHJAHANPUR | PUWANYA | S-NPP | 28.33650 | 80.11130 | 12:45:41 | D | 3.90 |
| 17 | SHAMLI | KAIRANA | S-NPP | 29.64720 | 77.20880 | 12:45:41 | D | 2.90 |

Details of residue burning events in Rajasthan on 20-Oct-2022

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_TIME | Day / Night | Fire Power (W/m2) |
|--------|----------|----------------|-----------|----------|-----------|----------|-------------|-------------------|
| 1 | BUNDI | KESHORAIPATAN | S-NPP | 25.42260 | 76.05730 | 14:25:59 | D | 4.60 |
| 2 | BUNDI | KESHORAIPATAN | S-NPP | 25.42440 | 76.05270 | 12:45:41 | D | 4.60 |
| 3 | BUNDI | KESHORAIPATAN | S-NPP | 25.42470 | 76.05560 | 14:25:59 | D | 3.40 |
| 4 | BUNDI | KESHORAIPATAN | S-NPP | 25.43280 | 76.03890 | 12:45:41 | D | 2.70 |

Details of residue burning events in Madhya Pradesh on 20-Oct-2022

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_TIME | Day / Night | Fire Power (W/m2) |
|--------|--------------|----------------|-----------|----------|-----------|----------|-------------|-------------------|
| 1 | ASHOKNAGAR | ASHOKNAGAR | S-NPP | 24.53100 | 77.53390 | 12:45:41 | D | 2.90 |
| 2 | DATIA | DATIA | S-NPP | 25.74950 | 78.36590 | 12:45:41 | D | 3.00 |
| 3 | HOSHANGABAD | SEONI MALWA | S-NPP | 22.50500 | 77.27780 | 12:45:41 | D | 1.80 |
| 4 | NARSHIMAPURA | NARSIMHAPUR | S-NPP | 23.06420 | 79.33380 | 12:45:41 | D | 2.30 |
| 5 | SAGAR | DEVRI | S-NPP | 23.57910 | 78.88790 | 12:45:41 | D | 2.50 |
| 6 | SEHORE | BUDHNI | S-NPP | 22.80160 | 77.45680 | 12:45:41 | D | 3.80 |
| 7 | SEHORE | BUDHNI | S-NPP | 22.80310 | 77.41190 | 12:45:41 | D | 1.80 |

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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|--------------|-----------------------|----------------------------------|--|
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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)

and on IARI CREAMS website (<http://creams.iari.res.in/cms2/index.php>)
