



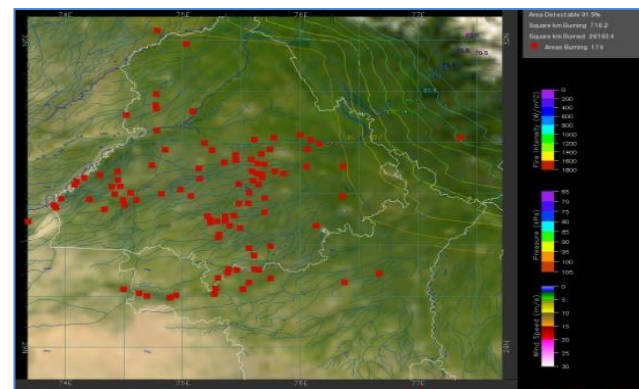
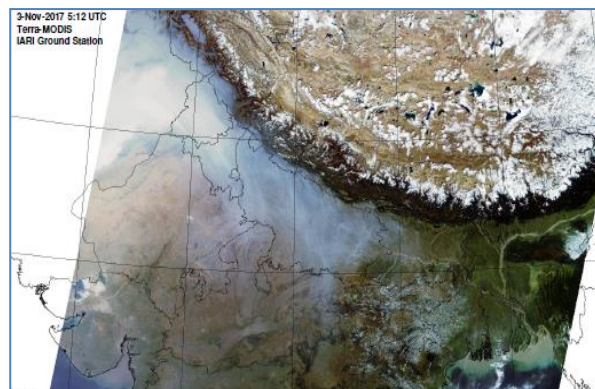
**Bulletin
No. 50**

**Events Date:
20-May-2022**

**Issued on:
21-May-2022**



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



Prepared by:

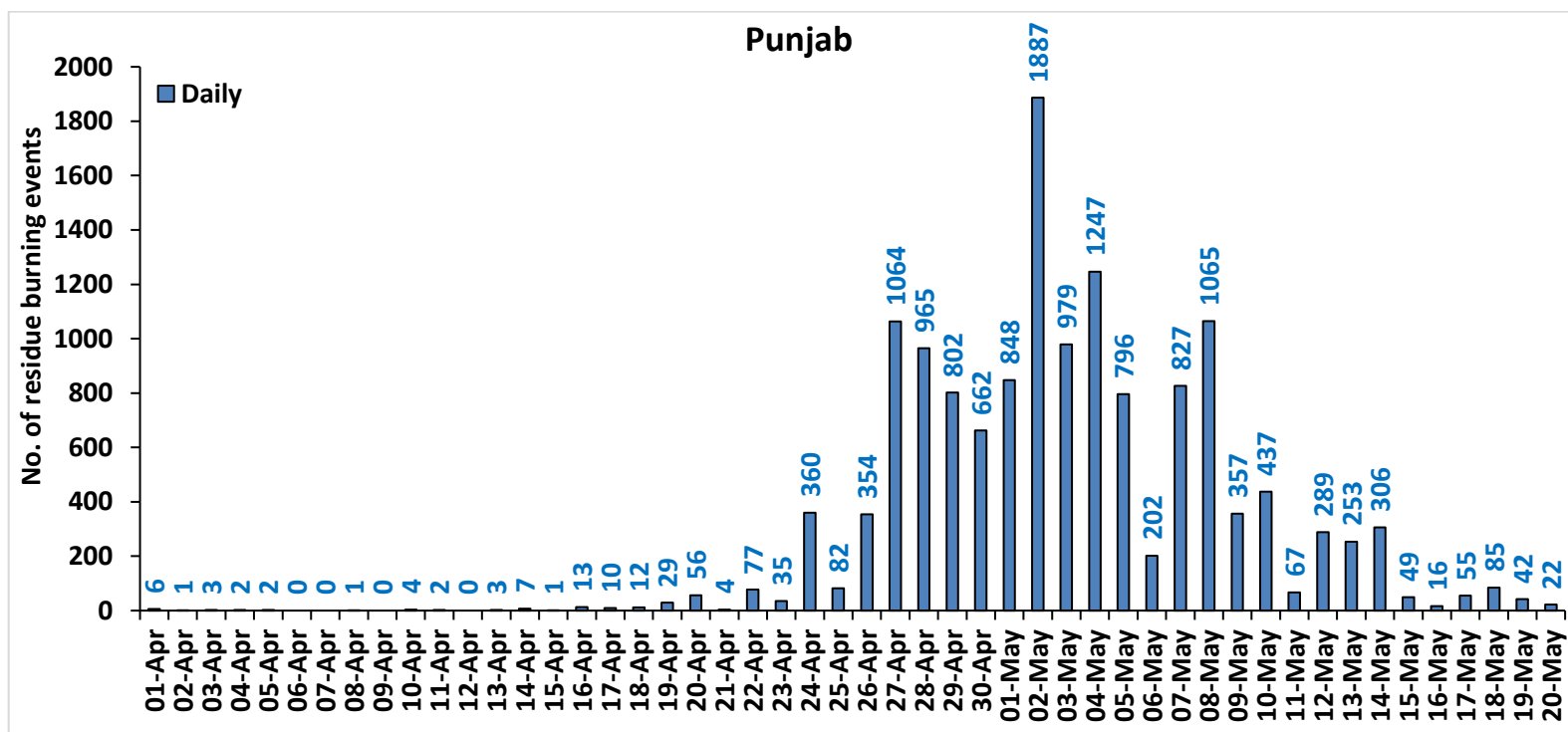
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

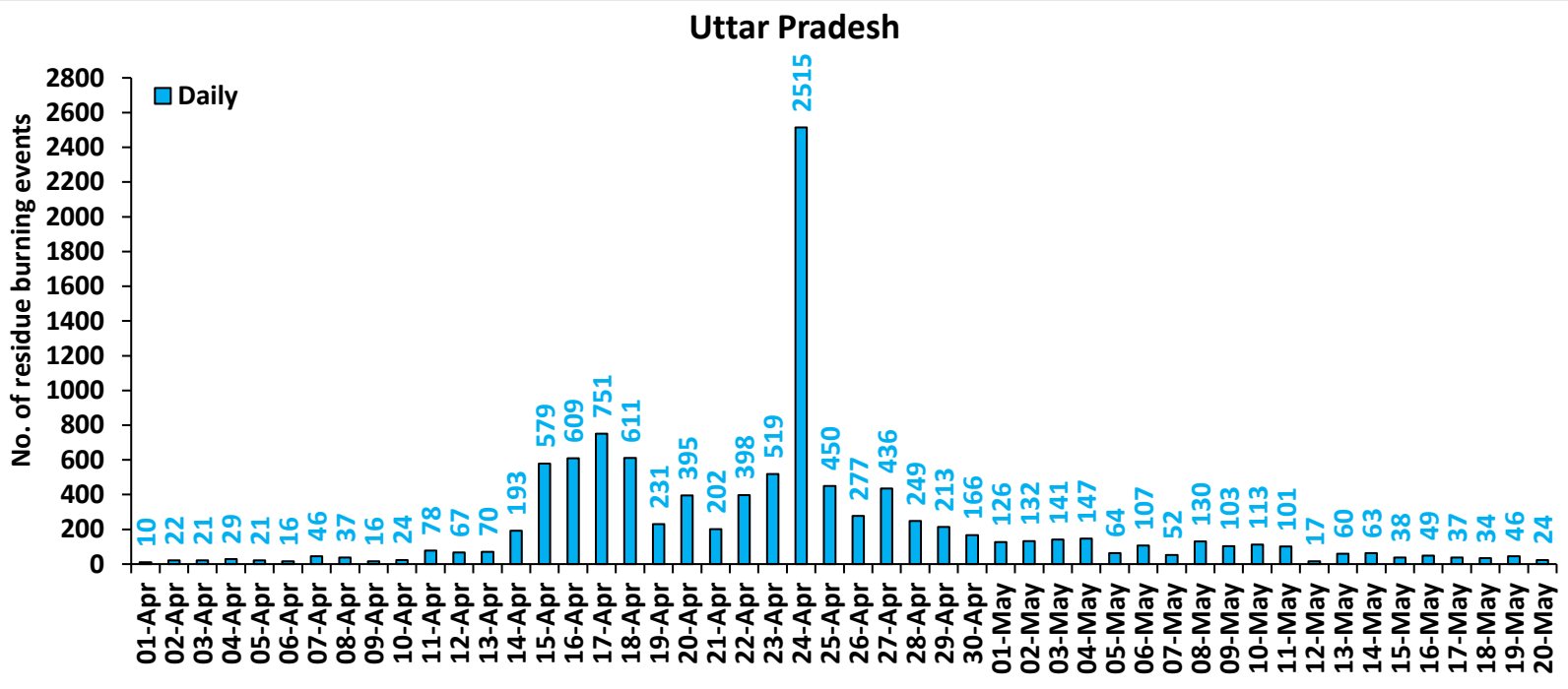
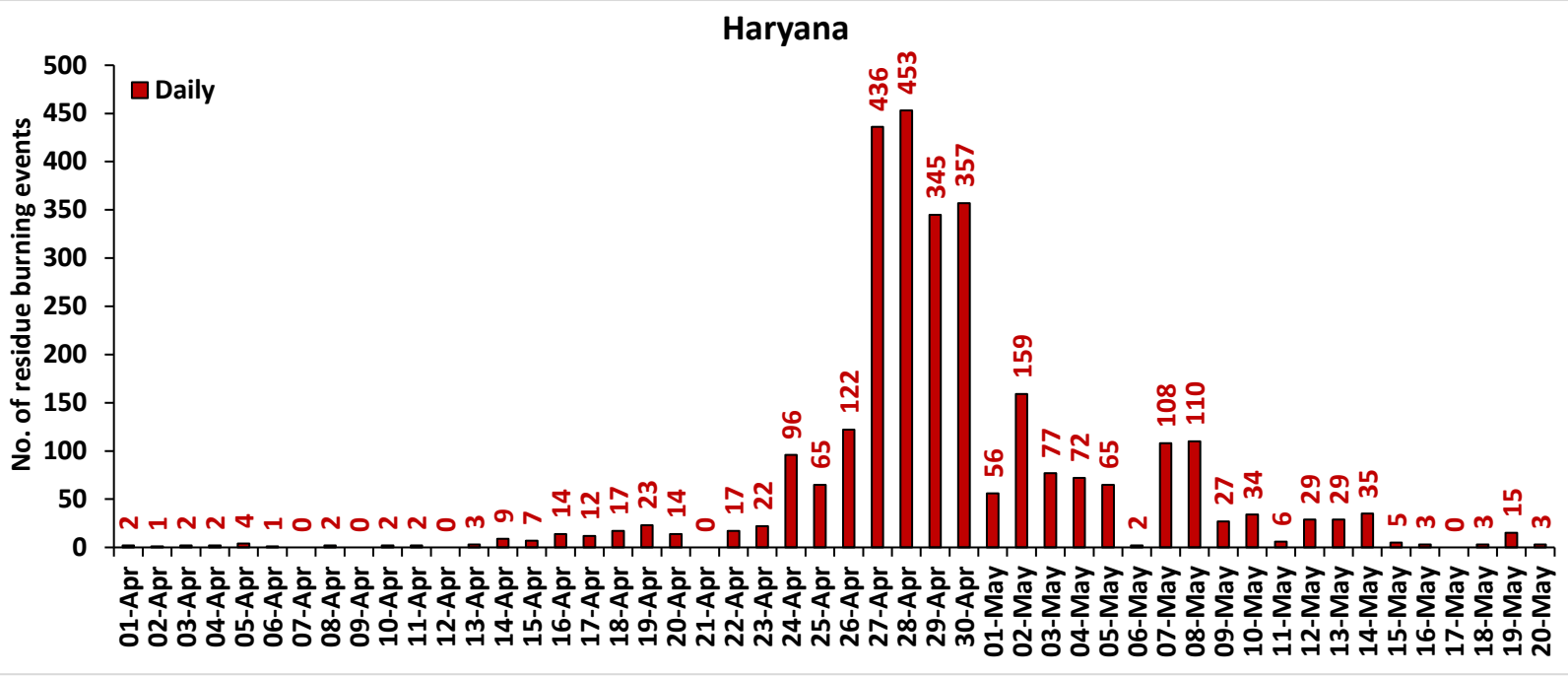
<http://creams.iari.res.in>

Highlights for 20-May-2022

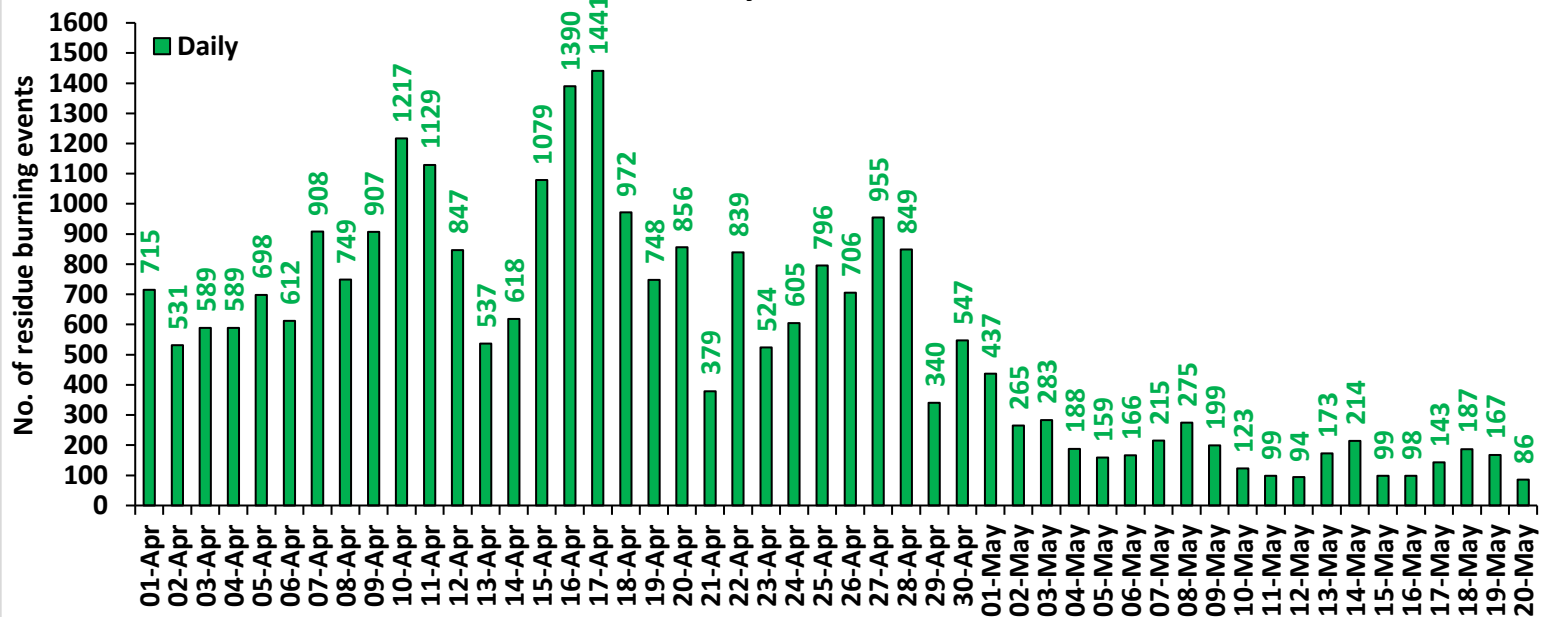
- The active fire events due to wheat residue burning were monitored using satellite remote sensing, following the new "Standard Protocol for Estimation of Crop Residue Burning Fire Events using Satellite Data".
- Satellites detected **135** residue burning events in the five study States on 20-May-2022.
- The state wise events detected on 20-May-2022 were **22** in Punjab, **03** in Haryana, **00** in Delhi, **24** in Uttar Pradesh and **86** in Madhya Pradesh.
- The number of events has decreased from **270** on 19-May-2022 to **135** on 20-May-2022 in the five study states.
- Total **55455** burning events were detected in the five states between 01-Apr-2022 and 20-May-2022, which are distributed as **14386**, **2868**, **10835**, **24**, and **27342** in Punjab, Haryana, UP, Delhi, and MP, respectively.

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

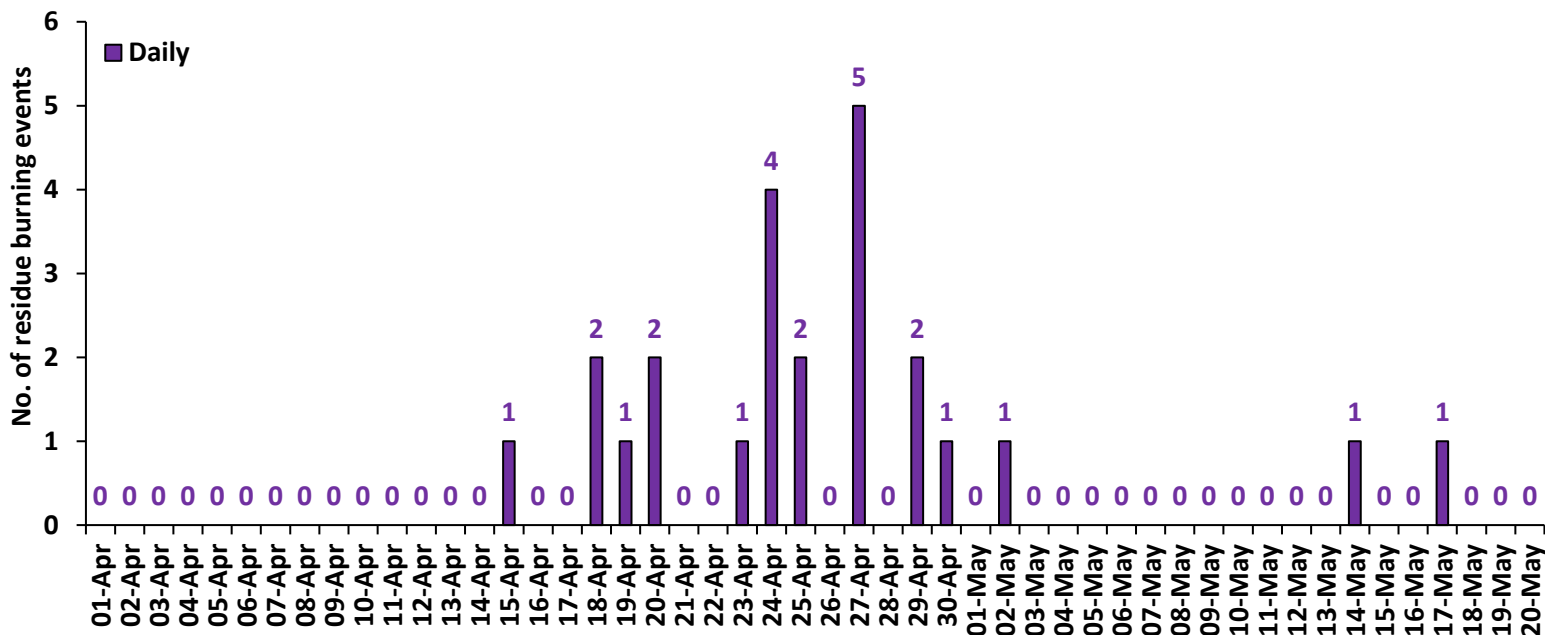




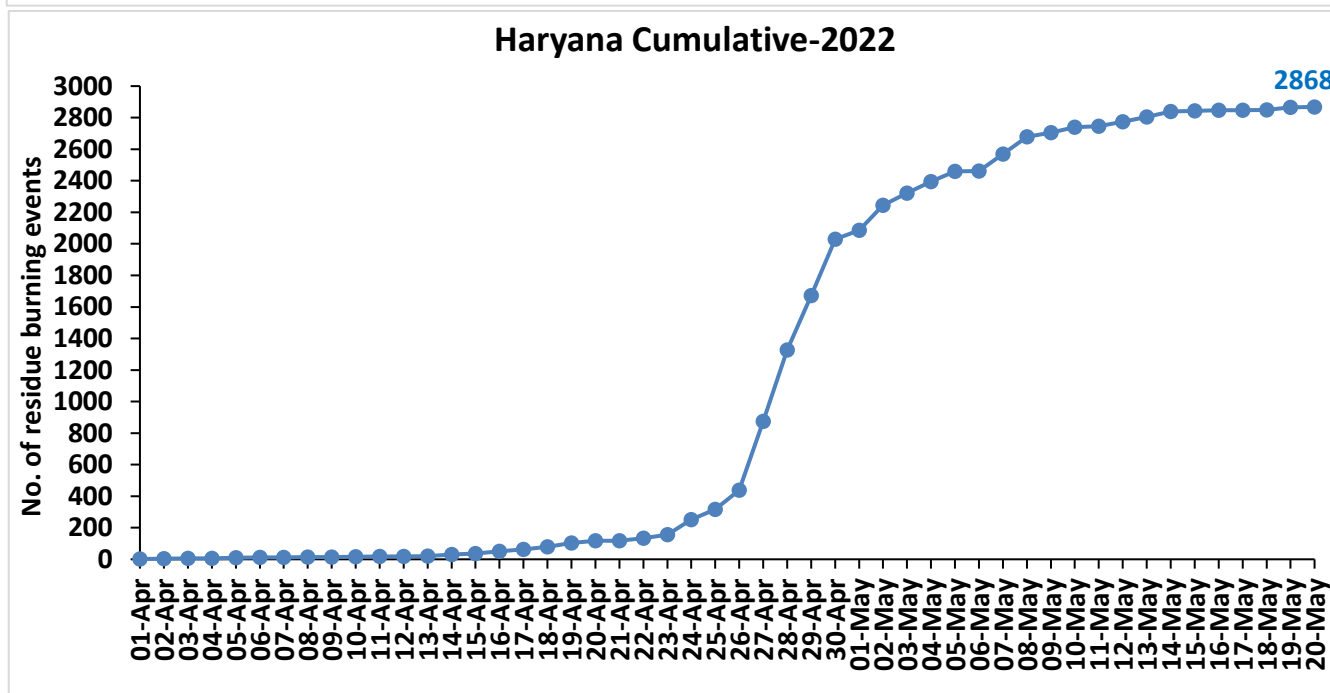
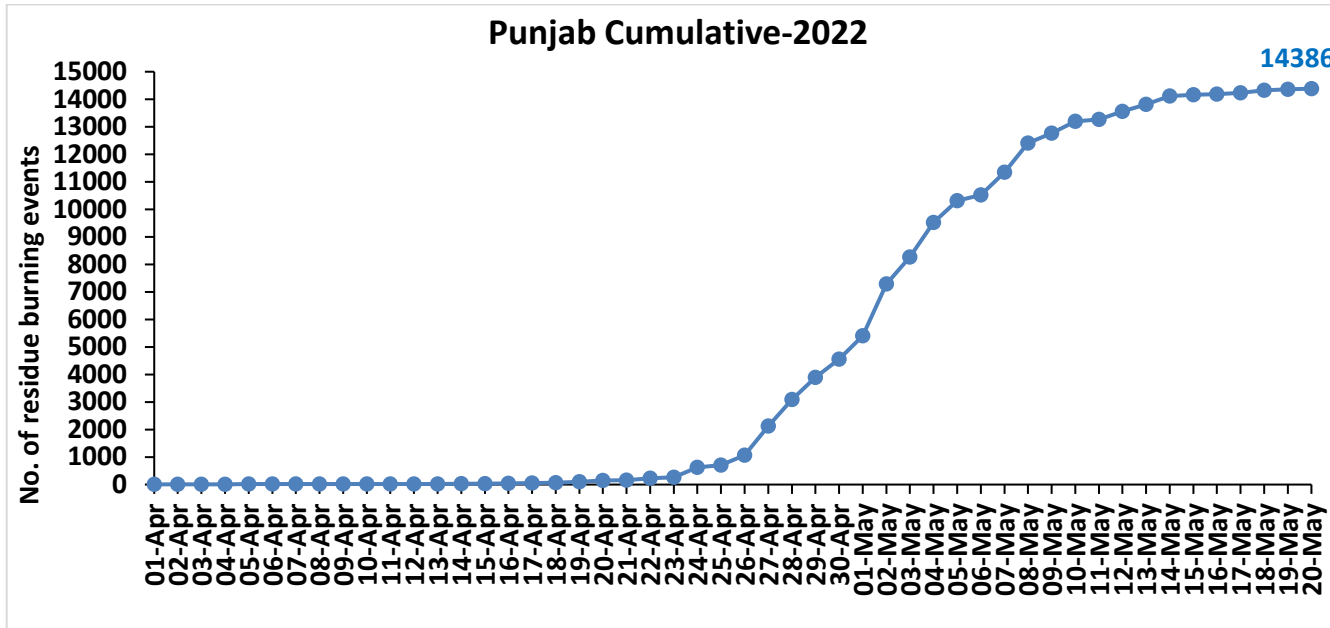
Madhya Pradesh



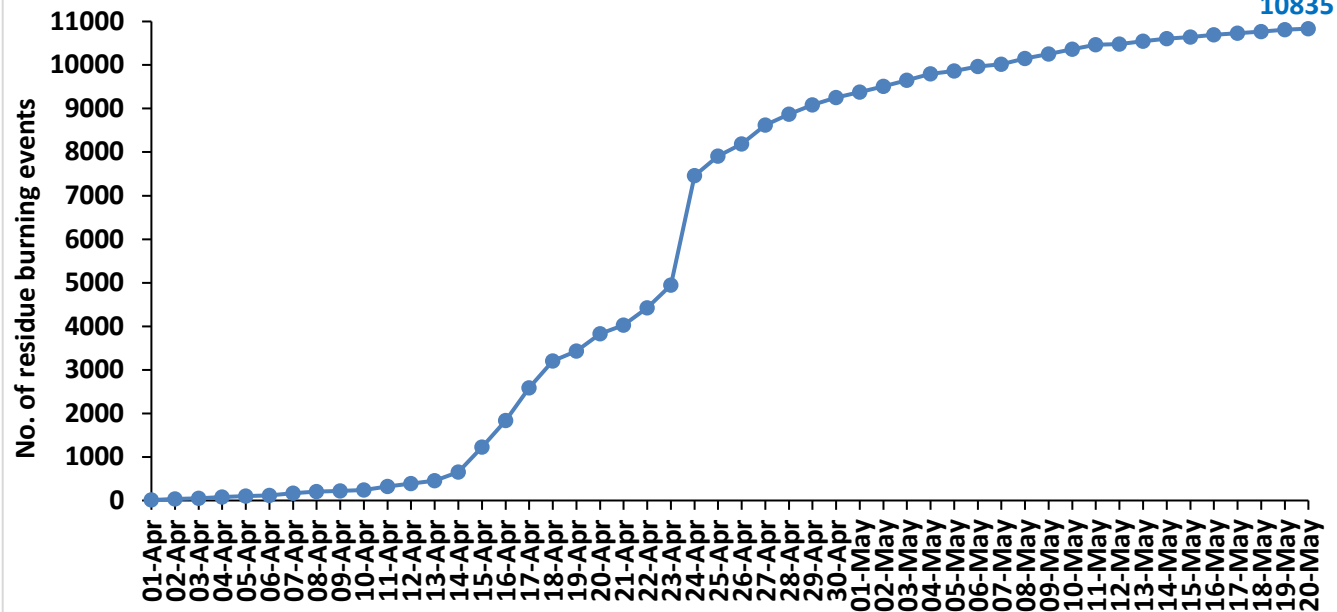
Delhi



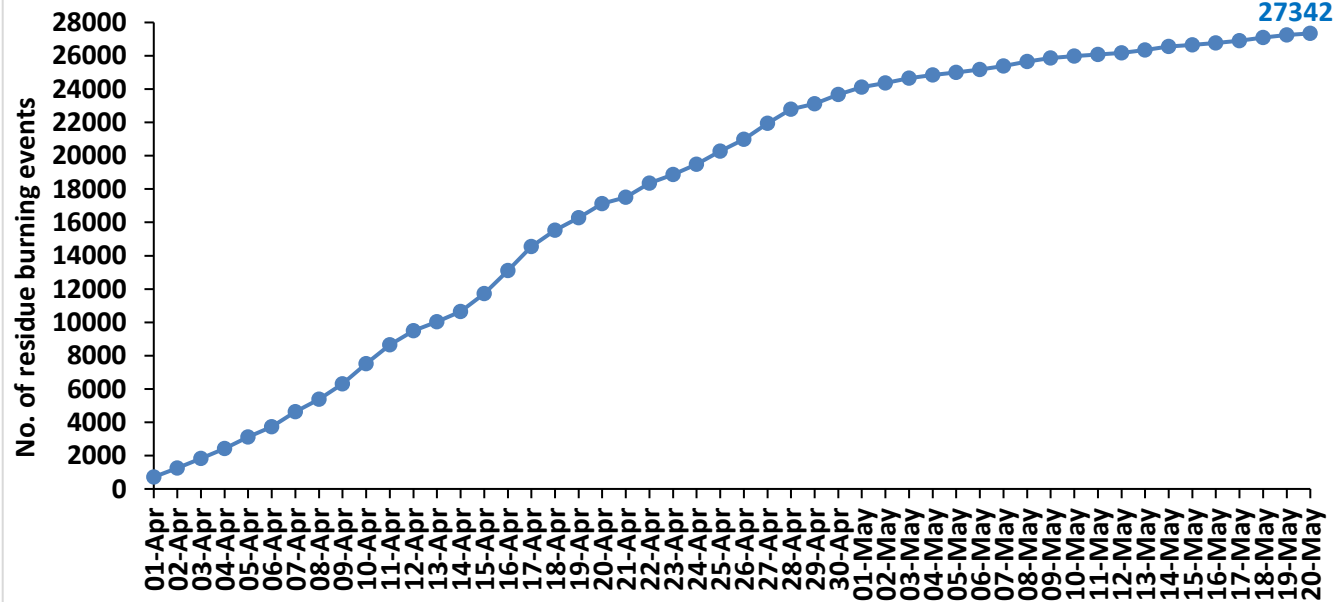
Cumulative Wheat Residue burning events in current year (2022) for the study States



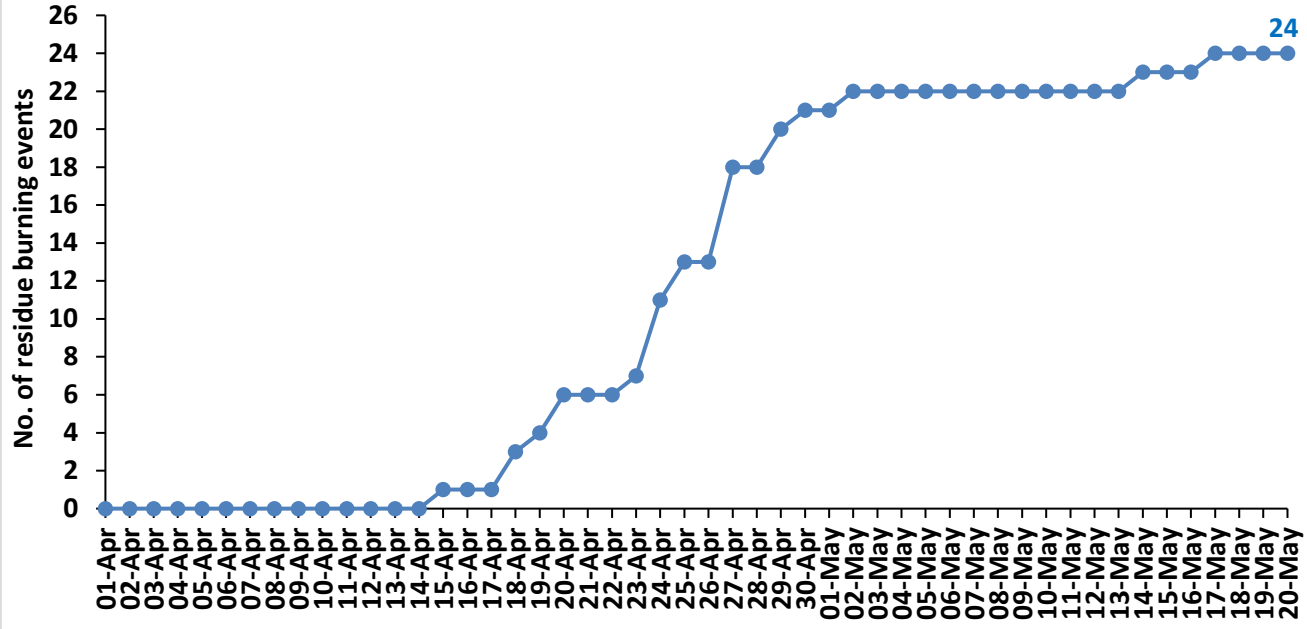
Uttar Pradesh Cumulative-2022



Madhya Pradesh Cumulative-2022

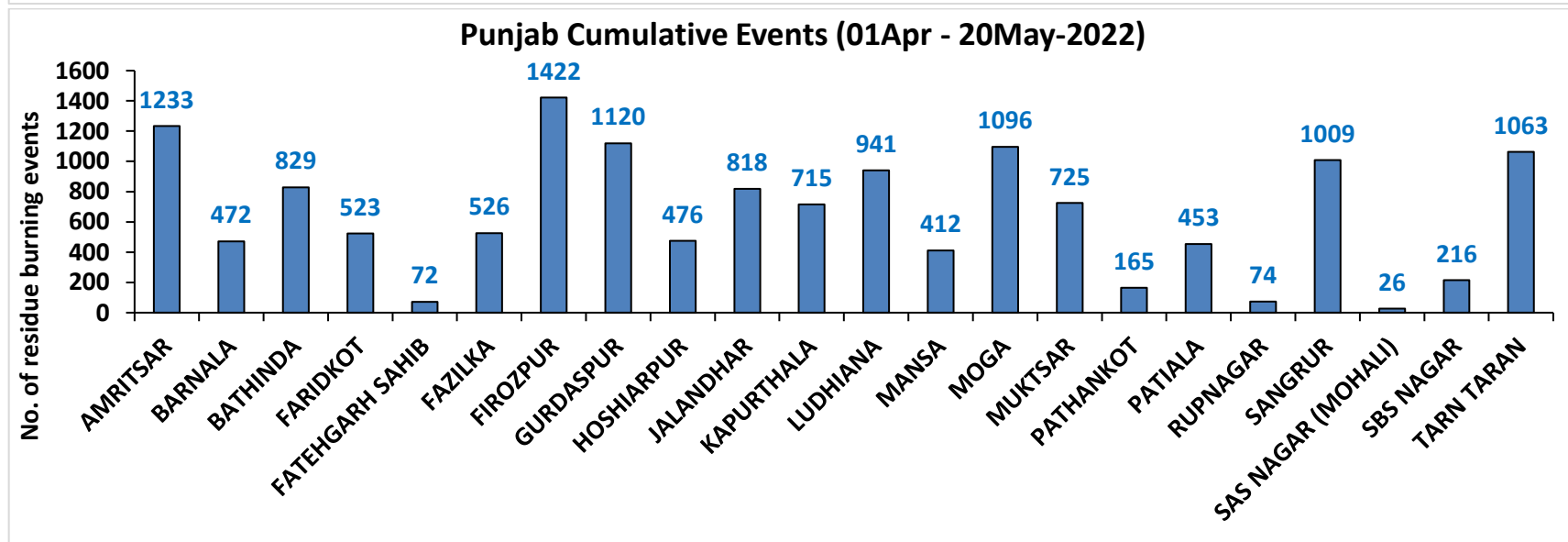
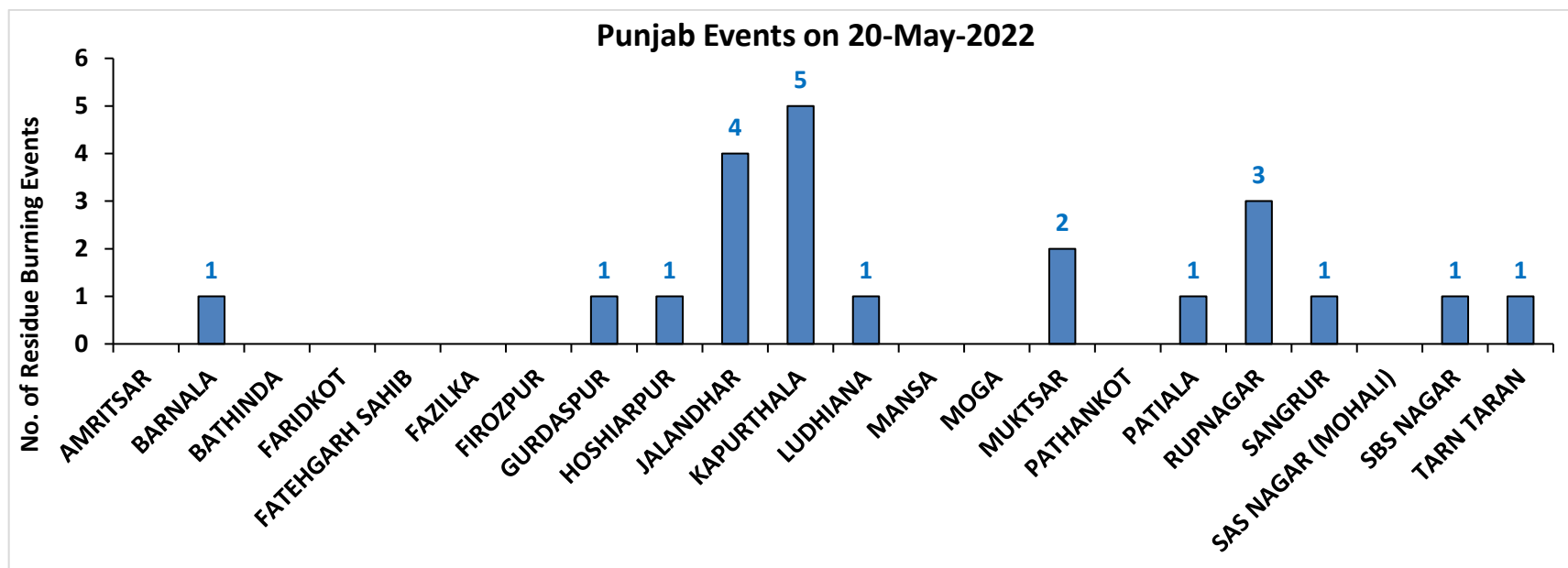


Delhi Cumulative-2022



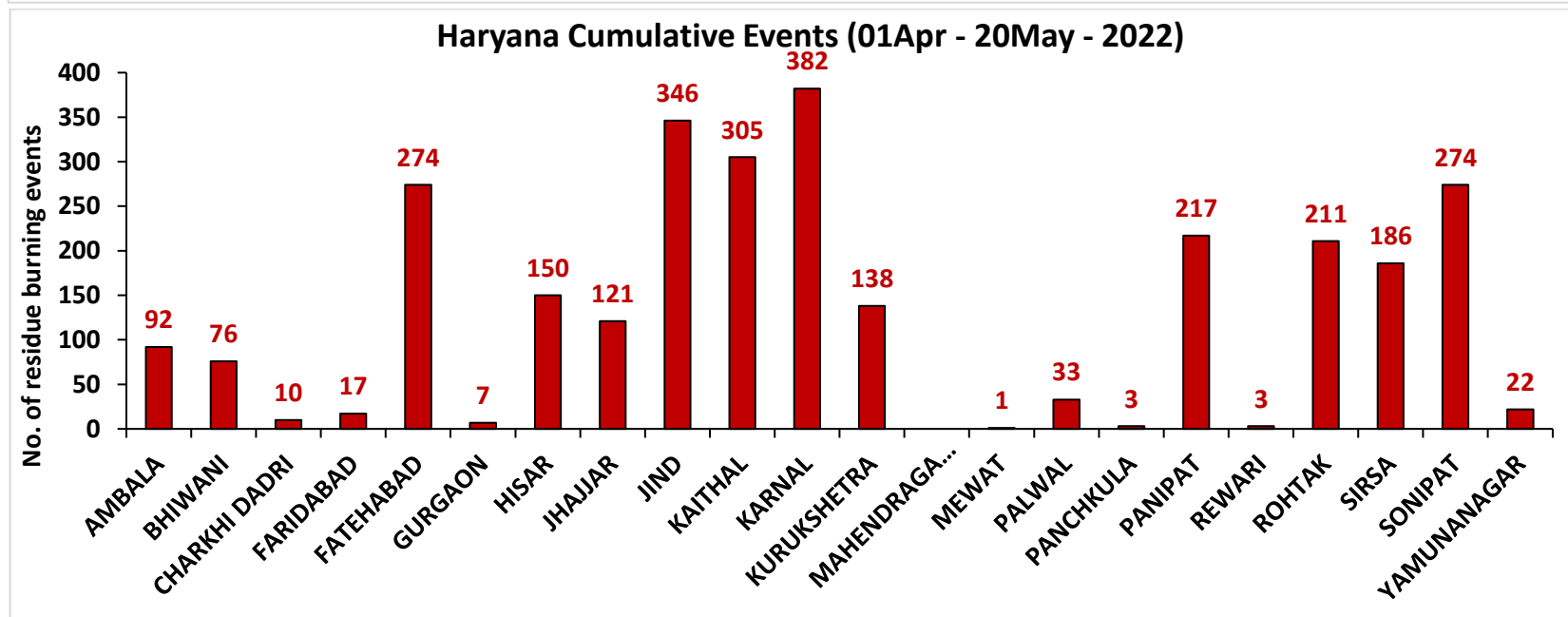
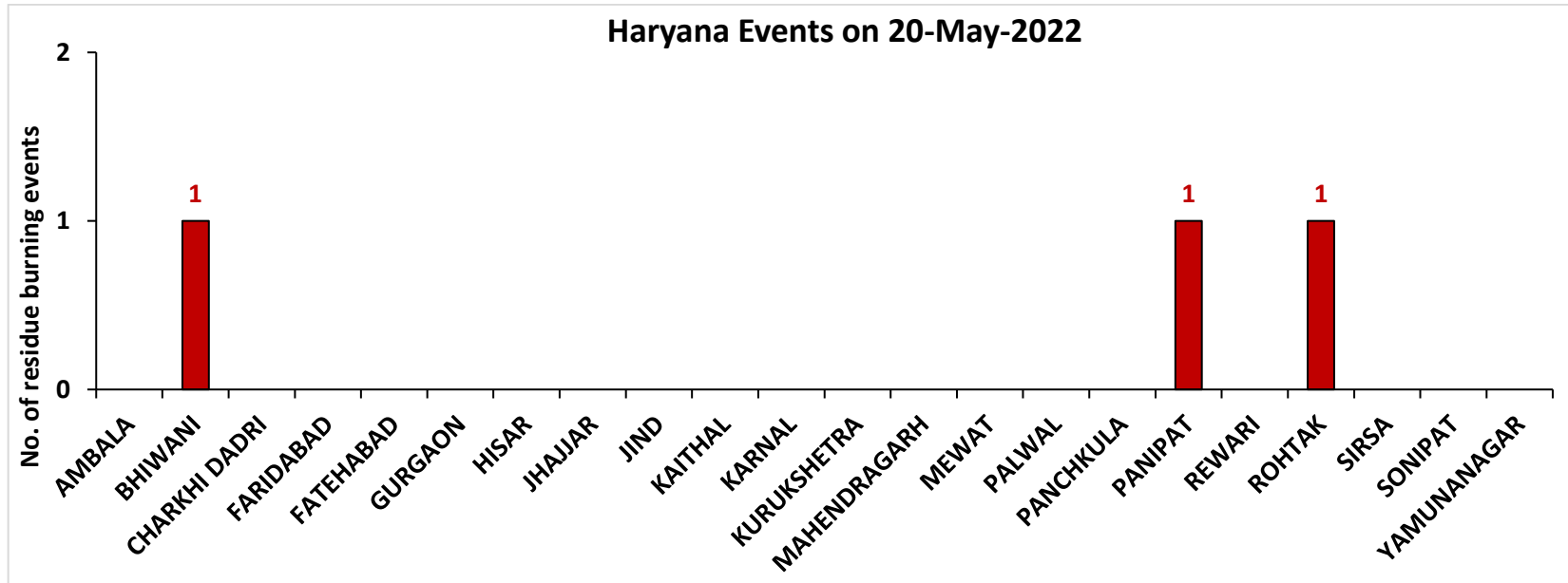
Punjab

District-wise cumulative number of wheat residue burning events in Punjab (01 Apr-20 May-2022)



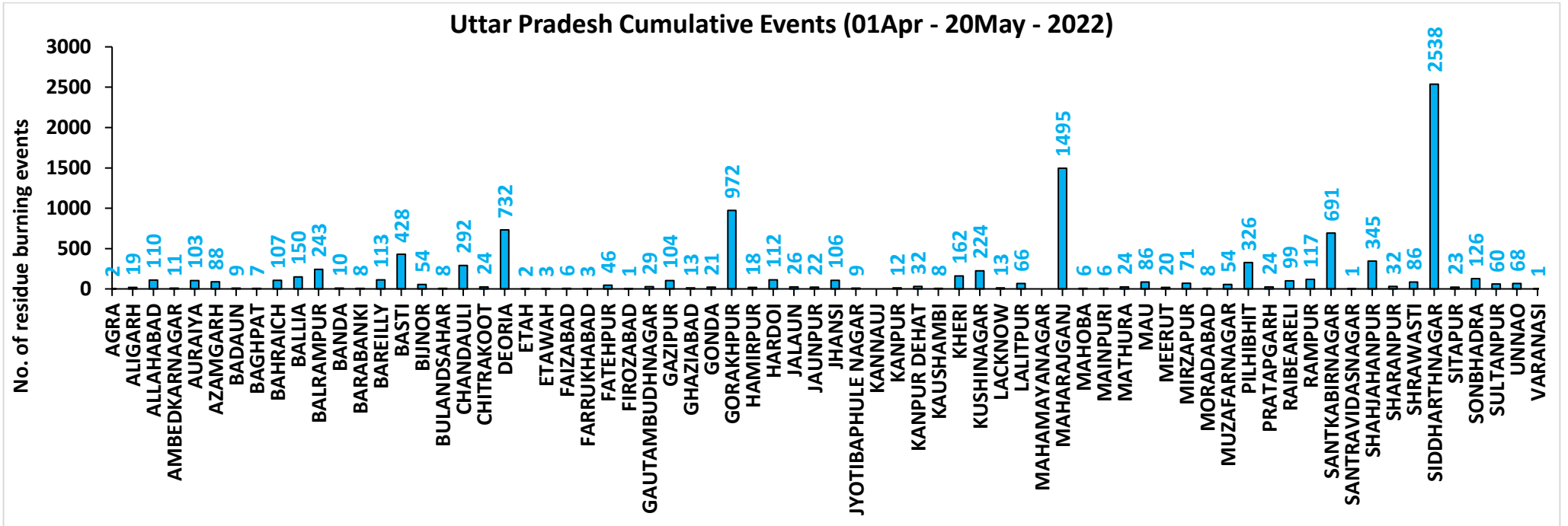
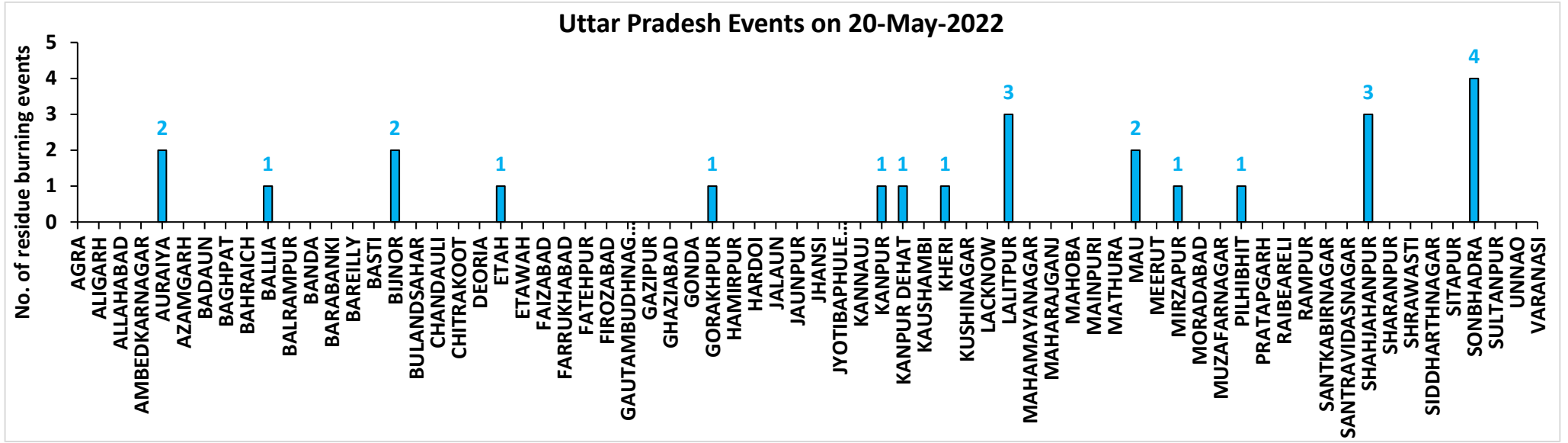
Haryana

District-wise cumulative number of residue burning events in Haryana (01 Apr-20 May-2022)



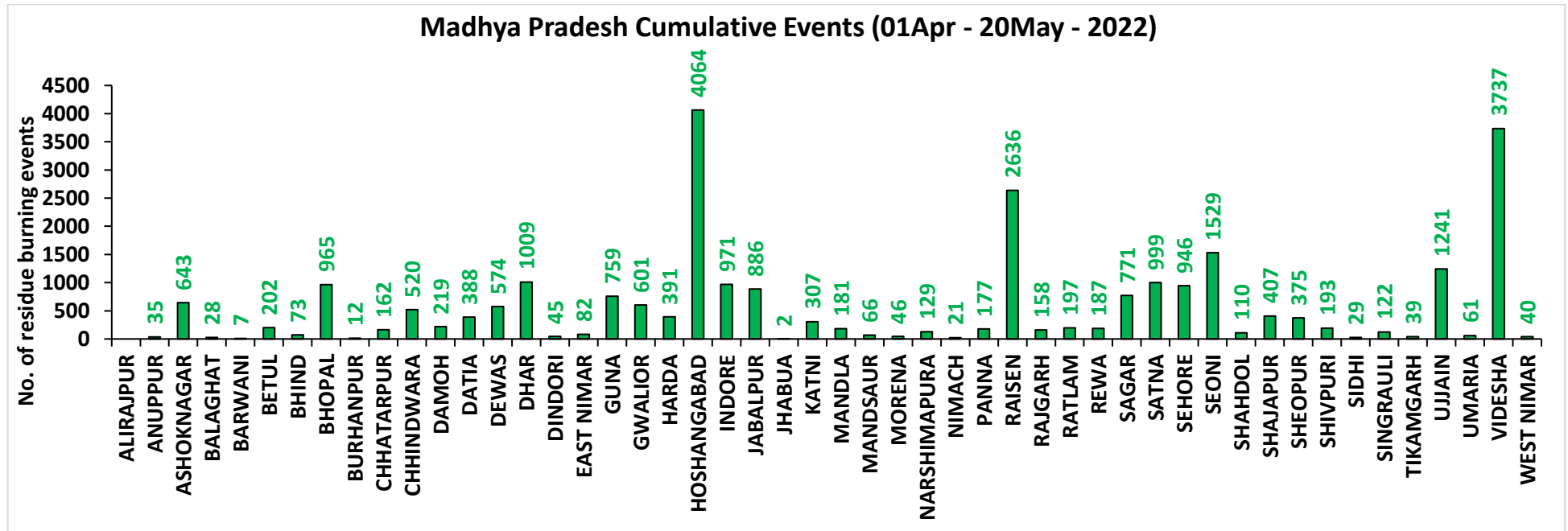
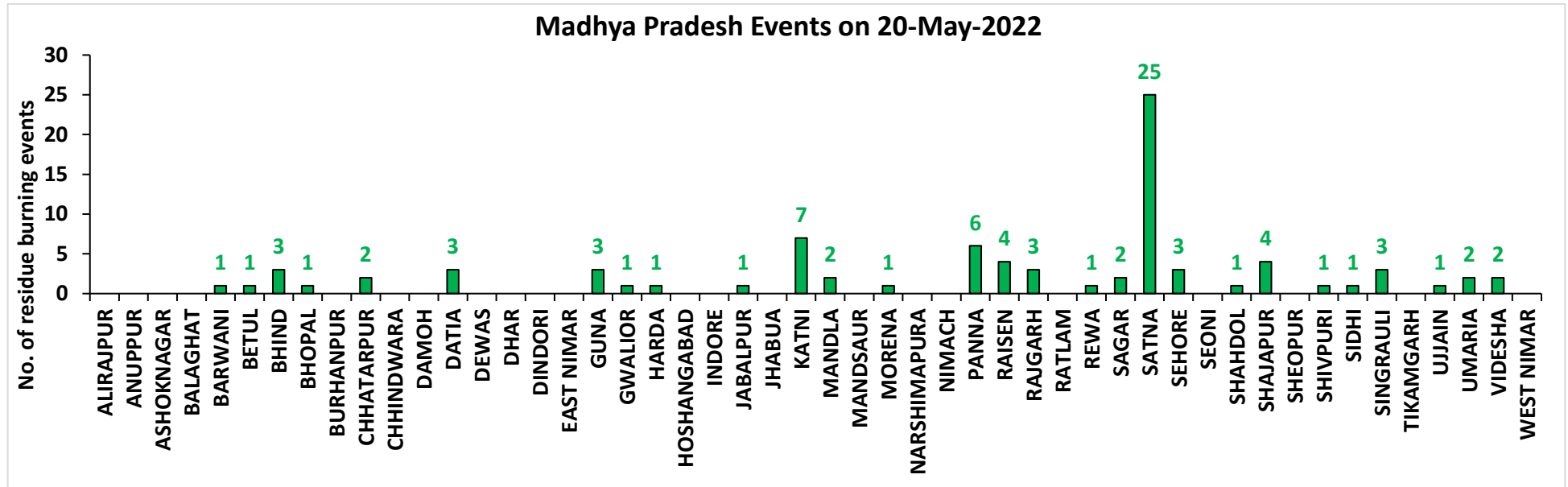
Uttar Pradesh

District-wise cumulative number of wheat residue burning events in Uttar Pradesh (01 Apr-20 May-2022)



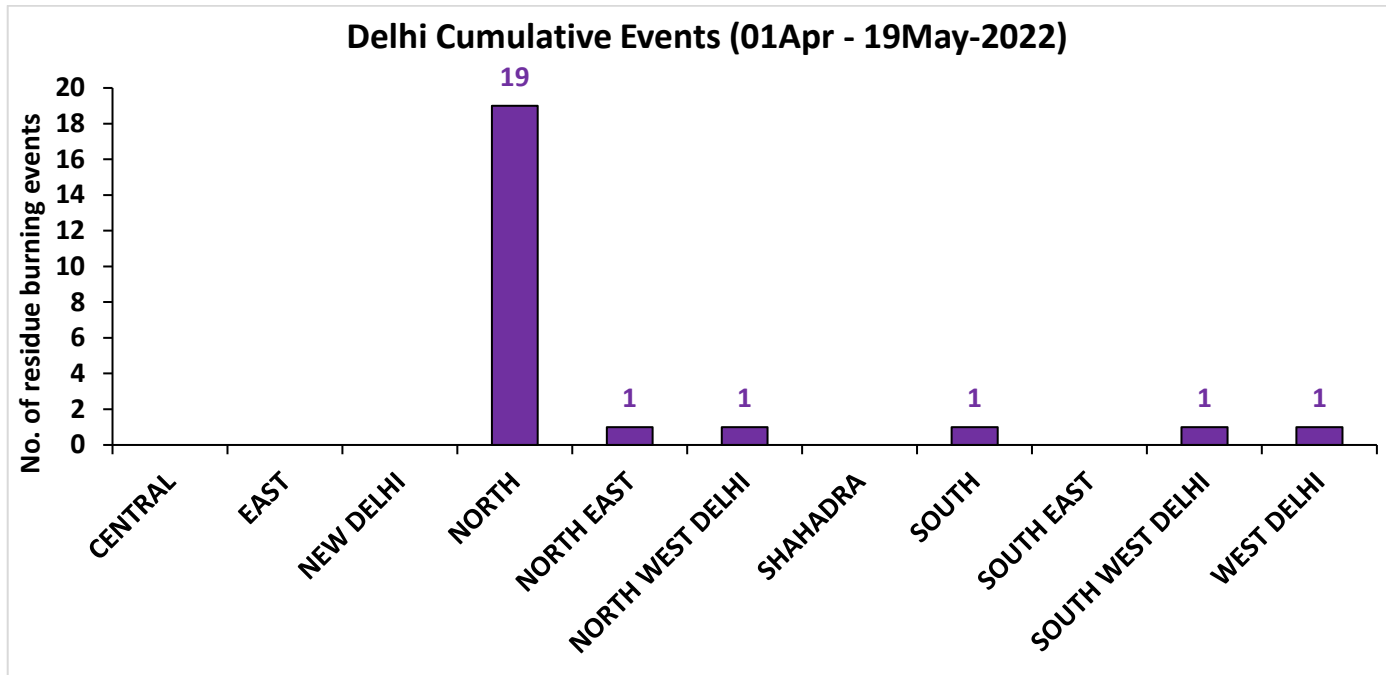
Madhya Pradesh

District-wise cumulative number of wheat residue burning events in Madhya Pradesh (01 Apr-20 May-2022)



Delhi

District-wise cumulative number of wheat residue burning events in Delhi (01 Apr-20May-2022)



District-wise cumulative number of wheat residue burning events detected in 2022

(Period: 01 April – 20 May)

(a) Punjab

| District | 01Apr-20 May |
|--------------------|--------------|
| | Year 2022 |
| Amritsar | 1233 |
| Barnala | 472 |
| Bathinda | 829 |
| Faridkot | 523 |
| Fatehgarh Sahib | 72 |
| Fazilka | 526 |
| Firozpur | 1422 |
| Gurdaspur | 1120 |
| Hoshiarpur | 476 |
| Jalandhar | 818 |
| Kapurthala | 715 |
| Ludhiana | 941 |
| Mansa | 412 |
| Moga | 1096 |
| Muktsar | 725 |
| Pathankot | 165 |
| Patiala | 453 |
| Rupnagar | 74 |
| Sangrur | 1009 |
| SAS NAGAR (Mohali) | 26 |
| SBS Nagar | 216 |
| Tarn Taran | 1063 |
| Total | 14386 |

(b) Haryana

| District | 01Apr-20 May |
|---------------|--------------|
| | Year 2022 |
| Ambala | 92 |
| Bhiwani | 76 |
| Charkhi Dadri | 10 |
| Faridabad | 17 |
| Fatehabad | 274 |
| Gurgaon | 7 |
| Hisar | 150 |
| Jhajjar | 121 |
| Jind | 346 |
| Kaithal | 305 |
| Karnal | 382 |
| Kurukshetra | 138 |
| Mahendragarh | 0 |
| Mewat | 1 |
| Palwal | 33 |
| Panchkula | 3 |
| Panipat | 217 |
| Rewari | 3 |
| Rohtak | 211 |
| Sirsa | 186 |
| Sonapat | 274 |
| Yamunanagar | 22 |
| Total | 2868 |

(c) Uttar Pradesh

| District | 01Apr-20May | | | | |
|---------------|-------------|--------------------|------|------------------|--------------|
| | Year 2022 | | | | |
| | | GAUTAMBUDHNAGAR | 29 | MUZAFARNAGAR | 54 |
| | | GAZIPUR | 104 | PILHIBHIT | 326 |
| AGRA | 2 | GHAZIABAD | 13 | PRATAPGARH | 24 |
| ALIGARH | 19 | GONDA | 21 | RAIBEARELI | 99 |
| ALLAHABAD | 110 | GORAKHPUR | 972 | RAMPUR | 117 |
| AMBEDKARNAGAR | 11 | HAMIRPUR | 18 | SANTKABIRNAGAR | 691 |
| AURAIYA | 103 | HARDOI | 112 | SANTRAVIDASNAGAR | 1 |
| AZAMGARH | 88 | JALAUN | 26 | SHAHJAHANPUR | 345 |
| BADAUN | 9 | JAUNPUR | 22 | SHARANPUR | 32 |
| BAGHPAT | 7 | JHANSI | 106 | SHRAWASTI | 86 |
| BAHRAICH | 107 | JYOTIBAPHULE NAGAR | 9 | SIDDHARTHANAGAR | 2538 |
| BALLIA | 150 | KANNAUJ | 0 | SITAPUR | 23 |
| BALRAMPUR | 243 | KANPUR | 12 | SONBHADRA | 126 |
| BANDA | 10 | KANPUR DEHAT | 32 | SULTANPUR | 60 |
| BARABANKI | 8 | KAUSHAMBI | 8 | UNNAO | 68 |
| BAREILLY | 113 | KHERI | 162 | VARANASI | 1 |
| BASTI | 428 | KUSHINAGAR | 224 | Total | 10835 |
| BIJNOR | 54 | LACKNOW | 13 | | |
| BULANDSAHAR | 8 | LALITPUR | 66 | | |
| CHANDAULI | 292 | MAHAMAYANAGAR | 0 | | |
| CHITRAKOOT | 24 | MAHARAJGANJ | 1495 | | |
| DEORIA | 732 | MAHOBA | 6 | | |
| ETAH | 2 | MAINPURI | 6 | | |
| ETAWAH | 3 | MATHURA | 24 | | |
| FAIZABAD | 6 | MAU | 86 | | |
| FARRUKHABAD | 3 | MEERUT | 20 | | |
| FATEHPUR | 46 | MIRZAPUR | 71 | | |
| FIROZABAD | 1 | MORADABAD | 8 | | |

(f) Madhya Pradesh

| District | 01Apr-20 May | |
|--------------|--------------|--------------------|
| | Year 2022 | |
| ALIRAJPUR | 0 | PANNA 177 |
| ANUPPUR | 35 | RAISEN 2636 |
| ASHOKNAGAR | 643 | RAJGARH 158 |
| BALAGHAT | 28 | RATLAM 197 |
| BARWANI | 7 | REWA 187 |
| BETUL | 202 | SAGAR 771 |
| BHIND | 73 | SATNA 999 |
| BHOPAL | 965 | SEHORE 946 |
| BURHANPUR | 12 | SEONI 1529 |
| CHHATARPUR | 162 | SHAHDOL 110 |
| CHHINDWARA | 520 | SHAJAPUR 407 |
| DAMOH | 219 | SHEOPUR 375 |
| DATIA | 388 | SHIVPURI 193 |
| DEWAS | 574 | SIDHI 29 |
| DHAR | 1009 | SINGRAULI 122 |
| DINDORI | 45 | TIKAMGARH 39 |
| EAST NIMAR | 82 | UJJAIN 1241 |
| GUNA | 759 | UMARIA 61 |
| GWALIOR | 601 | VIDESHA 3737 |
| HARDA | 391 | WEST NIMAR 40 |
| HOSHANGABAD | 4064 | Total 27342 |
| INDORE | 971 | |
| JABALPUR | 886 | |
| JHABUA | 2 | |
| KATNI | 307 | |
| MANDLA | 181 | |
| MANDSAUR | 66 | |
| MORENA | 46 | |
| NARSHIMAPURA | 129 | |
| NIMACH | 21 | |

(g) Delhi

| District | 01Apr-20 May |
|------------------|--------------|
| | 2022 |
| CENTRAL | 0 |
| EAST | 0 |
| NEW DELHI | 0 |
| NORTH | 19 |
| NORTH EAST | 1 |
| NORTH WEST DELHI | 1 |
| SHAHADRA | 0 |
| SOUTH | 1 |
| SOUTH EAST | 0 |
| SOUTH WEST DELHI | 1 |
| WEST DELHI | 1 |
| Total | 24 |

State-wise and date-wise number of wheat residue burning events detected in 2022

(Period: 01 April – 20 May)

| Date | Punjab | Haryana | UP | MP | Delhi |
|---------------|---------------|----------------|-----------|-----------|--------------|
| 1-Apr | 6 | 2 | 10 | 715 | 0 |
| 2-Apr | 1 | 1 | 22 | 531 | 0 |
| 3-Apr | 3 | 2 | 21 | 589 | 0 |
| 4-Apr | 2 | 2 | 29 | 589 | 0 |
| 5-Apr | 2 | 4 | 21 | 698 | 0 |
| 6-Apr | 0 | 1 | 16 | 612 | 0 |
| 7-Apr | 0 | 0 | 46 | 908 | 0 |
| 8-Apr | 1 | 2 | 37 | 749 | 0 |
| 9-Apr | 0 | 0 | 16 | 907 | 0 |
| 10-Apr | 4 | 2 | 24 | 1217 | 0 |
| 11-Apr | 2 | 2 | 78 | 1129 | 0 |
| 12-Apr | 0 | 0 | 67 | 847 | 0 |
| 13-Apr | 3 | 3 | 70 | 537 | 0 |
| 14-Apr | 7 | 9 | 193 | 618 | 0 |
| 15-Apr | 1 | 7 | 579 | 1079 | 1 |
| 16-Apr | 13 | 14 | 609 | 1390 | 0 |
| 17-Apr | 10 | 12 | 751 | 1441 | 0 |
| 18-Apr | 12 | 17 | 611 | 972 | 2 |
| 19-Apr | 29 | 23 | 231 | 748 | 1 |
| 20-Apr | 56 | 14 | 395 | 856 | 2 |
| 21-Apr | 4 | 0 | 202 | 379 | 0 |
| 22-Apr | 77 | 17 | 398 | 839 | 0 |
| 23-Apr | 35 | 22 | 519 | 524 | 1 |
| 24-Apr | 360 | 96 | 2515 | 605 | 4 |
| 25-Apr | 82 | 65 | 450 | 796 | 2 |
| 26-Apr | 354 | 122 | 277 | 706 | 0 |
| 27-Apr | 1064 | 436 | 436 | 955 | 5 |
| 28-Apr | 965 | 453 | 249 | 849 | 0 |
| 29-Apr | 802 | 345 | 213 | 340 | 2 |
| 30-Apr | 662 | 357 | 166 | 547 | 1 |
| 01-May | 848 | 56 | 126 | 437 | 0 |

| | | | | | |
|---------------|--------------|-------------|--------------|--------------|-----------|
| 02-May | 1887 | 159 | 132 | 265 | 1 |
| 03-May | 979 | 77 | 141 | 283 | 0 |
| 04-May | 1247 | 72 | 147 | 188 | 0 |
| 05-May | 796 | 65 | 64 | 159 | 0 |
| 06-May | 202 | 2 | 107 | 166 | 0 |
| 07-May | 827 | 108 | 52 | 215 | 0 |
| 08-May | 1065 | 110 | 130 | 275 | 0 |
| 09-May | 357 | 27 | 103 | 199 | 0 |
| 10-May | 437 | 34 | 113 | 123 | 0 |
| 11-May | 67 | 6 | 101 | 99 | 0 |
| 12-May | 289 | 29 | 17 | 94 | 0 |
| 13-May | 253 | 29 | 60 | 173 | 0 |
| 14-May | 306 | 35 | 63 | 214 | 1 |
| 15-May | 49 | 5 | 38 | 99 | 0 |
| 16-May | 16 | 3 | 49 | 98 | 0 |
| 17-May | 55 | 0 | 37 | 143 | 1 |
| 18-May | 85 | 3 | 34 | 187 | 0 |
| 19-May | 42 | 15 | 46 | 167 | 0 |
| 20-May | 22 | 3 | 24 | 86 | 0 |
| Total | 14386 | 2868 | 10835 | 27342 | 24 |

Details of wheat residue burning events in Punjab on 20-May-2022

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_DATE | ACQ_TIME | Day / Night | Fire Power (W/m2) |
|--------|------------|------------------|-----------|----------|-----------|-----------|----------|-------------|-------------------|
| 1 | BARNALA | MAHAL KALAN | npp | 30.55300 | 75.66520 | 5/20/2022 | 13:53:37 | D | 3.60 |
| 2 | GURDASPUR | QADIAN | npp | 31.78420 | 75.35740 | 5/20/2022 | 13:53:37 | D | 3.50 |
| 3 | HOSHIARPUR | HAJIPUR | npp | 31.96900 | 75.73740 | 5/20/2022 | 13:53:37 | D | 8.20 |
| 4 | JALANDHAR | ADAMPUR | npp | 31.45840 | 75.63600 | 5/20/2022 | 13:53:37 | D | 5.30 |
| 5 | JALANDHAR | NUR MAHAL | npp | 31.03020 | 75.61620 | 5/20/2022 | 13:53:37 | D | 8.40 |
| 6 | JALANDHAR | PHILLAUR | npp | 31.01010 | 75.84470 | 5/20/2022 | 13:53:37 | D | 18.10 |
| 7 | JALANDHAR | PHILLAUR | npp | 31.01180 | 75.84650 | 5/20/2022 | 13:53:37 | D | 17.10 |
| 8 | KAPURTHALA | DHILWAN | npp | 31.43690 | 75.25990 | 5/20/2022 | 13:53:37 | D | 10.60 |
| 9 | KAPURTHALA | DHILWAN | npp | 31.44100 | 75.25930 | 5/20/2022 | 13:53:37 | D | 10.60 |
| 10 | KAPURTHALA | DHILWAN | npp | 31.46630 | 75.30000 | 5/20/2022 | 13:53:37 | D | 6.40 |
| 11 | KAPURTHALA | PHAGWARA | npp | 31.33570 | 75.88880 | 5/20/2022 | 13:53:37 | D | 5.70 |
| 12 | KAPURTHALA | PHAGWARA | npp | 31.33770 | 75.88980 | 5/20/2022 | 13:53:37 | D | 7.40 |
| 13 | LUDHIANA | SUDHAR | npp | 30.79100 | 75.60970 | 5/20/2022 | 13:53:37 | D | 8.40 |
| 14 | MUKTSAR | LAMBI | npp | 29.93230 | 74.60410 | 5/20/2022 | 13:53:37 | D | 2.40 |
| 15 | MUKTSAR | MALOUT | Aqua | 30.19400 | 74.41700 | 5/20/2022 | 13:30:52 | D | 12.30 |
| 16 | PATIALA | PATIALA | npp | 30.38930 | 76.48570 | 5/20/2022 | 13:53:37 | D | 8.50 |
| 17 | RUPNAGAR | CHAMKAUR SAHIB | npp | 30.96190 | 76.35980 | 5/20/2022 | 13:53:37 | D | 7.60 |
| 18 | RUPNAGAR | CHAMKAUR SAHIB | npp | 30.96240 | 76.35820 | 5/20/2022 | 13:53:37 | D | 15.70 |
| 19 | RUPNAGAR | CHAMKAUR SAHIB | npp | 30.96630 | 76.35920 | 5/20/2022 | 13:53:37 | D | 7.60 |
| 20 | SANGRUR | MALERKOTLA-2 | npp | 30.61190 | 75.69540 | 5/20/2022 | 13:53:37 | D | 5.30 |
| 21 | SBS NAGAR | NAWAN SHAHR | npp | 31.03660 | 76.26080 | 5/20/2022 | 13:53:37 | D | 8.10 |
| 22 | TARN TARAN | NAUSHERA PANNUAN | npp | 31.38590 | 74.97300 | 5/20/2022 | 13:53:37 | D | 10.70 |

Details of wheat residue burning events in Haryana on 20-May-2022

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_DATE | ACQ_TIME | Day / Night | Fire Power (W/m2) |
|--------|----------|-----------------|-----------|----------|-----------|-----------|----------|-------------|-------------------|
| 1 | BHIWANI | BAWANI KHERA | npp | 28.98830 | 76.08410 | 5/20/2022 | 13:53:37 | D | 3.40 |
| 2 | PANIPAT | MADLAUDA | npp | 29.35490 | 76.79050 | 5/20/2022 | 13:53:37 | D | 4.70 |
| 3 | ROHTAK | ROHTAK | npp | 28.94990 | 76.52440 | 5/20/2022 | 13:53:37 | D | 6.00 |

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

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_DATE | ACQ_TIME | Day / Night | Fire Power (W/m2) |
|--------|--------------|------------------|-----------|----------|-----------|-----------|----------|-------------|-------------------|
| 1 | AURAIYA | BIDHUNA | npp | 26.63840 | 79.47860 | 5/20/2022 | 02:42:54 | N | 0.70 |
| 2 | AURAIYA | BIDHUNA | npp | 26.64400 | 79.48030 | 5/20/2022 | 02:42:54 | N | 0.70 |
| 3 | BALLIA | BELTHARA ROAD | npp | 26.00700 | 83.73650 | 5/20/2022 | 01:03:20 | N | 0.80 |
| 4 | BIJNOR | AFZALGARH | npp | 29.49000 | 78.68480 | 5/20/2022 | 13:53:37 | D | 2.70 |
| 5 | BIJNOR | AFZALGARH | npp | 29.49010 | 78.68530 | 5/20/2022 | 13:53:37 | D | 4.20 |
| 6 | ETAH | KASGANJ | npp | 27.75510 | 78.89890 | 5/20/2022 | 13:53:37 | D | 4.70 |
| 7 | GORAKHPUR | SAHJANWA | npp | 26.84200 | 83.15360 | 5/20/2022 | 12:13:20 | D | 1.90 |
| 8 | KANPUR | BILHAUR | npp | 26.77450 | 79.95520 | 5/20/2022 | 13:53:37 | D | 5.30 |
| 9 | KANPUR DEHAT | BHOGANIPUR | npp | 26.36300 | 79.84750 | 5/20/2022 | 13:53:37 | D | 2.20 |
| 10 | KHERI | LAKHIMPUR | Aqua | 27.86000 | 80.69600 | 5/20/2022 | 13:30:52 | D | 8.50 |
| 11 | LALITPUR | TALBEHAT | npp | 24.79800 | 78.47350 | 5/20/2022 | 13:53:37 | D | 8.70 |
| 12 | LALITPUR | TALBEHAT | npp | 24.79860 | 78.47880 | 5/20/2022 | 13:53:37 | D | 8.70 |
| 13 | LALITPUR | TALBEHAT | npp | 24.80080 | 78.47530 | 5/20/2022 | 13:53:37 | D | 19.50 |
| 14 | MAU | GHOSI | npp | 26.15630 | 83.54820 | 5/20/2022 | 01:03:20 | N | 0.90 |
| 15 | MAU | MAU | npp | 26.00500 | 83.73500 | 5/20/2022 | 12:13:20 | D | 1.80 |
| 16 | MIRZAPUR | CHUNAR | npp | 25.11500 | 82.96900 | 5/20/2022 | 01:03:20 | N | 0.40 |
| 17 | PILHIBHIT | BISALPUR | npp | 28.24820 | 79.71210 | 5/20/2022 | 13:53:37 | D | 2.50 |
| 18 | SHAHJAHANPUR | TILHAR | npp | 28.12240 | 79.66140 | 5/20/2022 | 13:53:37 | D | 1.60 |
| 19 | SHAHJAHANPUR | TILHAR | npp | 28.20780 | 79.85870 | 5/20/2022 | 13:53:37 | D | 1.10 |
| 20 | SHAHJAHANPUR | TILHAR | npp | 28.24790 | 79.70860 | 5/20/2022 | 13:53:37 | D | 2.50 |

| | | | | | | | | | |
|----|-----------|-------------|-------|----------|----------|-----------|----------|---|-------|
| 21 | SONBHADRA | DUDHI | npp | 24.02710 | 83.03450 | 5/20/2022 | 13:53:37 | D | 2.90 |
| 22 | SONBHADRA | DUDHI | npp | 24.02750 | 83.03660 | 5/20/2022 | 13:53:37 | D | 3.60 |
| 23 | SONBHADRA | DUDHI | npp | 24.18660 | 83.19140 | 5/20/2022 | 13:53:37 | D | 3.60 |
| 24 | SONBHADRA | REBUTSHGANJ | Terra | 24.70700 | 83.14200 | 5/20/2022 | 10:21:16 | D | 20.60 |

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

| S. No. | District | Tehsil / Block | Satellite | Latitude | Longitude | ACQ_DATE | ACQ_TIME | Day / Night | Fire Power (W/m2) |
|--------|------------|----------------|-----------|----------|-----------|-----------|----------|-------------|-------------------|
| 1 | BARWANI | PANSEMAL | npp | 21.63460 | 74.76510 | 5/20/2022 | 13:53:37 | D | 25.90 |
| 2 | BETUL | MULTAI | npp | 21.73300 | 78.40790 | 5/20/2022 | 13:53:37 | D | 16.70 |
| 3 | BHIND | ROUN | npp | 26.34020 | 79.09470 | 5/20/2022 | 13:53:37 | D | 7.90 |
| 4 | BHIND | ROUN | npp | 26.34400 | 79.09670 | 5/20/2022 | 13:53:37 | D | 11.80 |
| 5 | BHIND | ROUN | npp | 26.34570 | 79.10020 | 5/20/2022 | 13:53:37 | D | 7.90 |
| 6 | BHOPAL | HUZUR | npp | 23.43510 | 77.32230 | 5/20/2022 | 02:42:54 | N | 0.80 |
| 7 | CHHATARPUR | BARAMALEHRA | Aqua | 24.70900 | 79.31700 | 5/20/2022 | 13:30:52 | D | 19.20 |
| 8 | CHHATARPUR | RAJNAGAR | npp | 24.91060 | 79.76670 | 5/20/2022 | 02:42:54 | N | 0.80 |
| 9 | DATIA | BHANDER | npp | 25.93810 | 78.66110 | 5/20/2022 | 13:53:37 | D | 20.50 |
| 10 | DATIA | DATIA | npp | 25.71800 | 78.48680 | 5/20/2022 | 01:03:20 | N | 2.00 |
| 11 | DATIA | DATIA | npp | 25.73420 | 78.36720 | 5/20/2022 | 13:53:37 | D | 12.50 |
| 12 | GUNA | GUNA | npp | 24.86290 | 77.14940 | 5/20/2022 | 13:53:37 | D | 17.80 |
| 13 | GUNA | GUNA | npp | 24.86460 | 77.14870 | 5/20/2022 | 13:53:37 | D | 17.10 |
| 14 | GUNA | RAGHOGARH | npp | 23.95350 | 77.23300 | 5/20/2022 | 02:42:54 | N | 0.50 |
| 15 | GWALIOR | DABRA | npp | 25.97680 | 78.32740 | 5/20/2022 | 01:03:20 | N | 1.20 |
| 16 | HARDA | KHIRKIYAN | npp | 22.09660 | 77.14180 | 5/20/2022 | 13:53:37 | D | 9.40 |
| 17 | JABALPUR | PATAN | npp | 23.29400 | 79.69860 | 5/20/2022 | 02:42:54 | N | 1.00 |
| 18 | KATNI | BAHURIBAND | npp | 23.64070 | 80.21660 | 5/20/2022 | 13:53:37 | D | 8.60 |
| 19 | KATNI | BAHURIBAND | npp | 23.64100 | 80.21980 | 5/20/2022 | 13:53:37 | D | 8.60 |
| 20 | KATNI | BAHURIBAND | npp | 23.64140 | 80.22310 | 5/20/2022 | 13:53:37 | D | 10.50 |
| 21 | KATNI | BAHURIBAND | npp | 23.68850 | 80.03970 | 5/20/2022 | 13:53:37 | D | 10.40 |
| 22 | KATNI | BIJERAGHOGARH | npp | 23.96760 | 80.74510 | 5/20/2022 | 01:03:20 | N | 0.80 |
| 23 | KATNI | DHIMERKHEDA | npp | 23.55710 | 80.23710 | 5/20/2022 | 13:53:37 | D | 2.30 |

| | | | | | | | | | |
|----|---------|----------------|-------|----------|----------|-----------|----------|---|-------|
| 24 | KATNI | MURBARA | npp | 23.73080 | 80.38240 | 5/20/2022 | 13:53:37 | D | 4.40 |
| 25 | MANDLA | NAINPUR | npp | 22.51380 | 80.05130 | 5/20/2022 | 13:53:37 | D | 18.90 |
| 26 | MANDLA | NAINPUR | npp | 22.51390 | 80.05090 | 5/20/2022 | 13:53:37 | D | 26.70 |
| 27 | MORENA | KAILARAS | npp | 26.35060 | 77.69850 | 5/20/2022 | 13:53:37 | D | 3.90 |
| 28 | PANNA | AJAIGARH | npp | 24.99290 | 80.24460 | 5/20/2022 | 13:53:37 | D | 14.80 |
| 29 | PANNA | GUNAUR | npp | 24.41270 | 80.10180 | 5/20/2022 | 13:53:37 | D | 13.40 |
| 30 | PANNA | GUNAUR | npp | 24.41530 | 80.10190 | 5/20/2022 | 13:53:37 | D | 16.10 |
| 31 | PANNA | GUNAUR | Terra | 24.41400 | 80.10200 | 5/20/2022 | 10:21:16 | D | 23.90 |
| 32 | PANNA | PAWAI | npp | 24.31220 | 80.21170 | 5/20/2022 | 13:53:37 | D | 14.00 |
| 33 | PANNA | SHAHNAGAR | npp | 23.98950 | 80.32550 | 5/20/2022 | 13:53:37 | D | 5.60 |
| 34 | RAISEN | BARELI | npp | 22.79300 | 78.10980 | 5/20/2022 | 13:53:37 | D | 13.70 |
| 35 | RAISEN | GOHARGANJ | npp | 23.03190 | 77.54600 | 5/20/2022 | 13:53:37 | D | 21.90 |
| 36 | RAISEN | RAISEN | npp | 23.29380 | 77.73790 | 5/20/2022 | 13:53:37 | D | 13.60 |
| 37 | RAISEN | RAISEN | npp | 23.46740 | 77.53470 | 5/20/2022 | 02:42:54 | N | 1.60 |
| 38 | RAJGARH | SARANGPUR | npp | 23.57550 | 76.58560 | 5/20/2022 | 13:53:37 | D | 12.90 |
| 39 | RAJGARH | SARANGPUR | npp | 23.61120 | 76.60820 | 5/20/2022 | 13:53:37 | D | 4.10 |
| 40 | RAJGARH | SARANGPUR | npp | 23.66970 | 76.54530 | 5/20/2022 | 02:42:54 | N | 2.60 |
| 41 | REWA | TEONTHAR | npp | 25.02920 | 81.50310 | 5/20/2022 | 13:53:37 | D | 5.80 |
| 42 | SAGAR | KESALI | npp | 23.51860 | 78.75150 | 5/20/2022 | 02:42:54 | N | 1.80 |
| 43 | SAGAR | REHLI | npp | 23.54150 | 79.06600 | 5/20/2022 | 01:03:20 | N | 3.00 |
| 44 | SATNA | AMARPATAN | npp | 24.40680 | 81.18070 | 5/20/2022 | 01:03:20 | N | 0.40 |
| 45 | SATNA | AMARPATAN | npp | 24.48320 | 81.15660 | 5/20/2022 | 01:03:20 | N | 1.10 |
| 46 | SATNA | MAIHAR | npp | 24.31340 | 80.80010 | 5/20/2022 | 13:53:37 | D | 5.30 |
| 47 | SATNA | MAJHGAWAN | npp | 24.84370 | 81.01650 | 5/20/2022 | 13:53:37 | D | 9.40 |
| 48 | SATNA | NAGOD | Aqua | 24.47600 | 80.57400 | 5/20/2022 | 13:30:52 | D | 11.90 |
| 49 | SATNA | NAGOD | Aqua | 24.52900 | 80.62600 | 5/20/2022 | 13:30:52 | D | 26.00 |
| 50 | SATNA | RAGURAJNAGAR | npp | 24.66400 | 80.64330 | 5/20/2022 | 01:03:20 | N | 0.70 |
| 51 | SATNA | RAMPURBAGHLEAN | npp | 24.54210 | 81.01910 | 5/20/2022 | 01:03:20 | N | 0.70 |
| 52 | SATNA | RAMPURBAGHLEAN | npp | 24.67430 | 80.99450 | 5/20/2022 | 02:42:54 | N | 1.40 |
| 53 | SATNA | RAMPURBAGHLEAN | npp | 24.70250 | 81.12140 | 5/20/2022 | 02:42:54 | N | 1.10 |
| 54 | SATNA | RAMPURBAGHLEAN | npp | 24.70400 | 81.13750 | 5/20/2022 | 12:13:20 | D | 20.90 |
| 55 | SATNA | RAMPURBAGHLEAN | npp | 24.70490 | 81.13080 | 5/20/2022 | 12:13:20 | D | 4.30 |
| 56 | SATNA | RAMPURBAGHLEAN | npp | 24.70590 | 81.14460 | 5/20/2022 | 12:13:20 | D | 25.30 |

| | | | | | | | | | |
|----|-----------|----------------|-------|----------|----------|-----------|----------|---|-------|
| 57 | SATNA | RAMPURBAGHLEAN | npp | 24.70680 | 81.13800 | 5/20/2022 | 12:13:20 | D | 15.10 |
| 58 | SATNA | RAMPURBAGHLEAN | npp | 24.70860 | 81.14520 | 5/20/2022 | 12:13:20 | D | 15.10 |
| 59 | SATNA | UCHAHAR | npp | 24.38770 | 80.80320 | 5/20/2022 | 01:03:20 | N | 0.60 |
| 60 | SATNA | UCHAHAR | npp | 24.40900 | 80.82830 | 5/20/2022 | 01:03:20 | N | 0.80 |
| 61 | SATNA | UCHAHAR | npp | 24.41000 | 80.83000 | 5/20/2022 | 01:03:20 | N | 0.60 |
| 62 | SATNA | UCHAHAR | npp | 24.48680 | 80.77010 | 5/20/2022 | 13:53:37 | D | 5.10 |
| 63 | SATNA | UCHAHAR | npp | 24.48710 | 80.77370 | 5/20/2022 | 13:53:37 | D | 5.10 |
| 64 | SATNA | UCHAHAR | npp | 24.48740 | 80.77730 | 5/20/2022 | 13:53:37 | D | 8.10 |
| 65 | SATNA | UCHAHAR | npp | 24.49010 | 80.77090 | 5/20/2022 | 13:53:37 | D | 7.40 |
| 66 | SATNA | UCHAHAR | npp | 24.49050 | 80.77460 | 5/20/2022 | 13:53:37 | D | 7.40 |
| 67 | SATNA | UCHAHAR | npp | 24.52770 | 80.76740 | 5/20/2022 | 13:53:37 | D | 5.90 |
| 68 | SATNA | UCHAHAR | npp | 24.52800 | 80.77100 | 5/20/2022 | 13:53:37 | D | 5.90 |
| 69 | SEHORE | BUDHNI | npp | 22.71980 | 77.50460 | 5/20/2022 | 01:03:20 | N | 2.10 |
| 70 | SEHORE | SEHORE | npp | 23.07450 | 77.31600 | 5/20/2022 | 13:53:37 | D | 17.30 |
| 71 | SEHORE | SEHORE | npp | 23.40280 | 77.23320 | 5/20/2022 | 02:42:54 | N | 0.70 |
| 72 | SHAHDOL | JASINGH NAGAR | npp | 23.70420 | 81.32460 | 5/20/2022 | 13:53:37 | D | 9.60 |
| 73 | SHAJAPUR | MOMAN BARODIY | npp | 23.62420 | 76.38880 | 5/20/2022 | 02:42:54 | N | 0.70 |
| 74 | SHAJAPUR | MOMAN BARODIY | npp | 23.62670 | 76.38980 | 5/20/2022 | 02:42:54 | N | 0.70 |
| 75 | SHAJAPUR | MOMAN BARODIY | npp | 23.63990 | 76.29460 | 5/20/2022 | 02:42:54 | N | 0.60 |
| 76 | SHAJAPUR | MOMAN BARODIY | npp | 23.64180 | 76.29530 | 5/20/2022 | 02:42:54 | N | 0.70 |
| 77 | SHIVPURI | NARWAR | npp | 25.70970 | 78.05950 | 5/20/2022 | 02:42:54 | N | 0.90 |
| 78 | SIDHI | GOADBANAS | npp | 24.36640 | 81.89690 | 5/20/2022 | 13:53:37 | D | 0.80 |
| 79 | SINGRAULI | CHITRANGI | Terra | 24.47200 | 82.40900 | 5/20/2022 | 10:21:16 | D | 12.60 |
| 80 | SINGRAULI | SINGRAULI | npp | 24.17190 | 82.67770 | 5/20/2022 | 13:53:37 | D | 4.50 |
| 81 | SINGRAULI | SINGRAULI | npp | 24.17480 | 82.66560 | 5/20/2022 | 01:03:20 | N | 0.70 |
| 82 | UJJAIN | NAGDA | npp | 23.39960 | 75.39810 | 5/20/2022 | 13:53:37 | D | 6.50 |
| 83 | UMARIA | MANPUR | npp | 23.92170 | 80.90030 | 5/20/2022 | 13:53:37 | D | 9.60 |
| 84 | UMARIA | MANPUR | npp | 23.92200 | 80.90400 | 5/20/2022 | 13:53:37 | D | 10.30 |
| 85 | VIDESHA | KORWAI | npp | 23.98960 | 78.28280 | 5/20/2022 | 13:53:37 | D | 8.60 |
| 86 | VIDESHA | SIRANJ | npp | 24.07870 | 77.67040 | 5/20/2022 | 13:53:37 | D | 19.50 |

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 wheat masks for the Punjab and Haryana were provided by MNCFC, MoA&FW, Govt of India
The rabi crop masks for Delhi, Uttar Pradesh and Madhya Pradesh were provided by NRSC (ISRO)**

Study Team

| | | | |
|--------------|-----------------------|----------------------------------|--|
| ICAR – HQ | Dr S.N. Jha | 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 | Pr. Scientist & Nodal Officer | iaricreams@gmail.com |
| | Dr Rajkumar Dhakar | Scientist | raidhakar.iari@gmail.com |
| | 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 | Director | rajender.parsad@icar.gov.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)
