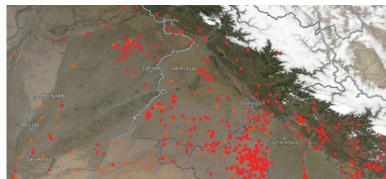
MONITORING WHEAT RESIDUE BURNING IN PUNJAB USING GEOSPATIAL TECHNOLOGIES 2024











Prepared By:

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Highlights for 05 April 2024

- The active fire incidents 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" developed on the directions of "Commission for Air Quality Management in National Capital Region and Adjoining Areas".
- Satellites detected 02 incidents in the Punjab State on 05 April 2024.

District-wise Active Fire Events in Punjab

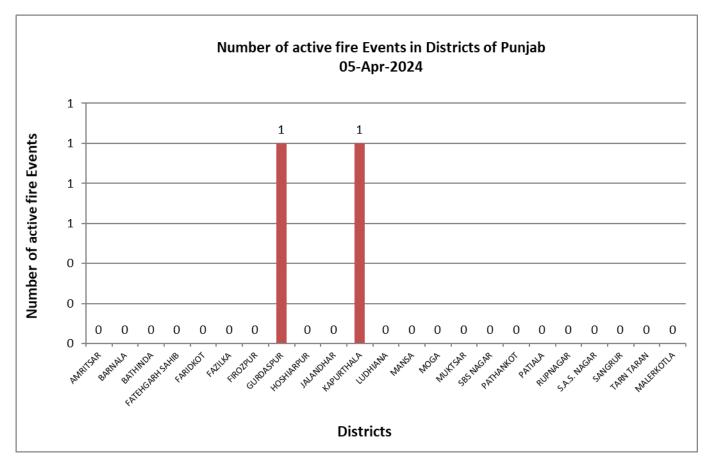


Fig. 1. District-wise fire incidents (Total events = 2) captured by Satellite in Punjab on 05 April 2024

On April, 05 2024, 02 active fire incidents were captured by the Satellite in state of Punjab.

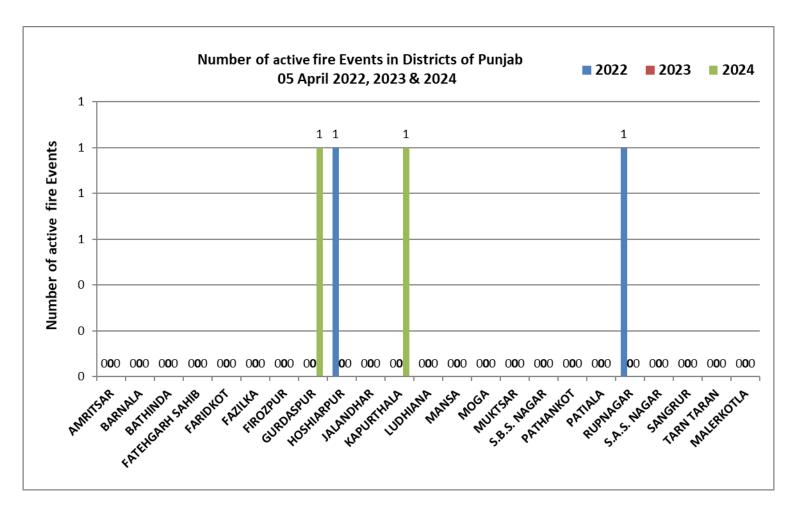


Fig 2 : District-wise comparison of fire incidents captured in Punjab on 05 April 2022, 2023 & 2024

On April, 05 2024, 02 active fire events were captured by the Satellite in state of Punjab. Whereas on the same day (i.e. April 05), in the year 2022, 02 active fire events were captured and in the year 2023 there were 0 active fire events in state of Punjab.

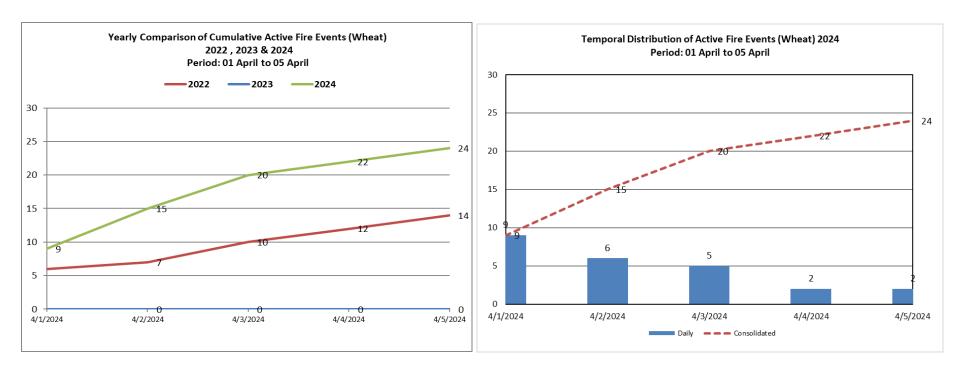
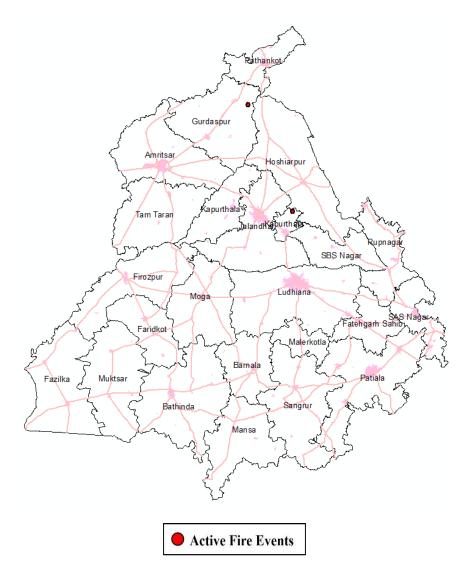


Fig 3 : Cumulative fire incidents captured in Punjab upto 05 April 2022, 2023 & 2024

Fig 4: Date-wise Cumulative fire incidents captured in Punjab upto 05 April 2024



Map.1. Active fire locations detected in Punjab on 05 April 2024 by Satellite

Table.1. Active fire locations detected in Punjab on 05 April 2024 by Satellite

| S.N | . Latitude | Longitude | Detection_ Confidenc e | Radiative_ power (W/m2) | sat | Acq-date | acqtime | District | Tehsil | Block | Village | Hadb ast No | Thana |
|-----|------------|-----------|------------------------------|-------------------------------|-----|----------|-----------------|------------|---------------|---------------|------------------|-------------------|-------------------------------|
| 1 | 31.34866 | 75.82780 | 8 | 3.7 | npp | 4/5/2024 | 12:51:1 3 PM | Kapurthala | Phag wara | Phagwar a | Rihana Jattan | 11 | Rawalpindi, Kapurthala |
| 2 | 32.02059 | 75.50654 | 8 | 4.2 | npp | 4/5/2024 | 12:51:1 3 PM | Gurdaspur | Gurda spur | Gurdasp ur | Gajikot | 644 | Purana Shalla Gurdaspur |

The data from following Satellites received at NRSC Ground Station were used

| S. No. | Satellite Name | Sensor | Resolution (m) | Day/Night Passses |
|--------|----------------|--------|----------------|-------------------|
| 1 | Suomi NPP | VIIRS | 375 | Both |
| 2 | Terra | MODIS | 1000 | Both |
| 3 | Aqua | MODIS | 1000 | Both |

The Wheat mask for the States was provided by MNCFC, MoA&FW, Govt. of India

GIS Maps of fire events can be visualized online on Crop Residue Burning (CRB) Information and Management System of **Punjab Remote**Sensing Centre, Ludhiana by following the link: http://202.164.39.172/residue/Index.aspx