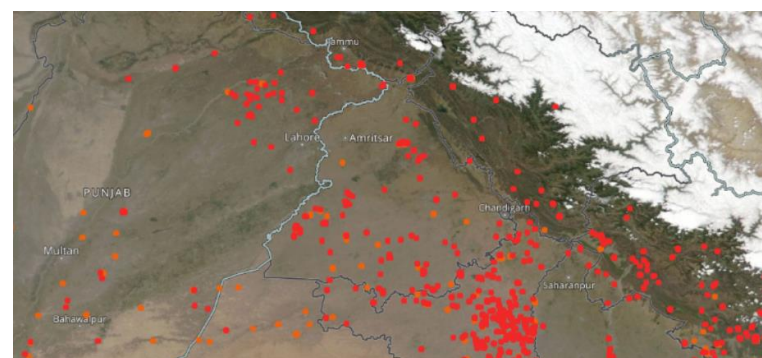


MONITORING WHEAT RESIDUE BURNING IN PUNJAB USING GEOSPATIAL TECHNOLOGIES 2024



Prepared By:
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for
Punjab Pollution Control Board, Patiala, Punjab



Highlights for 27 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 22 incidents in the Punjab State on 27 April 2024.

District-wise Active Fire Events in Punjab

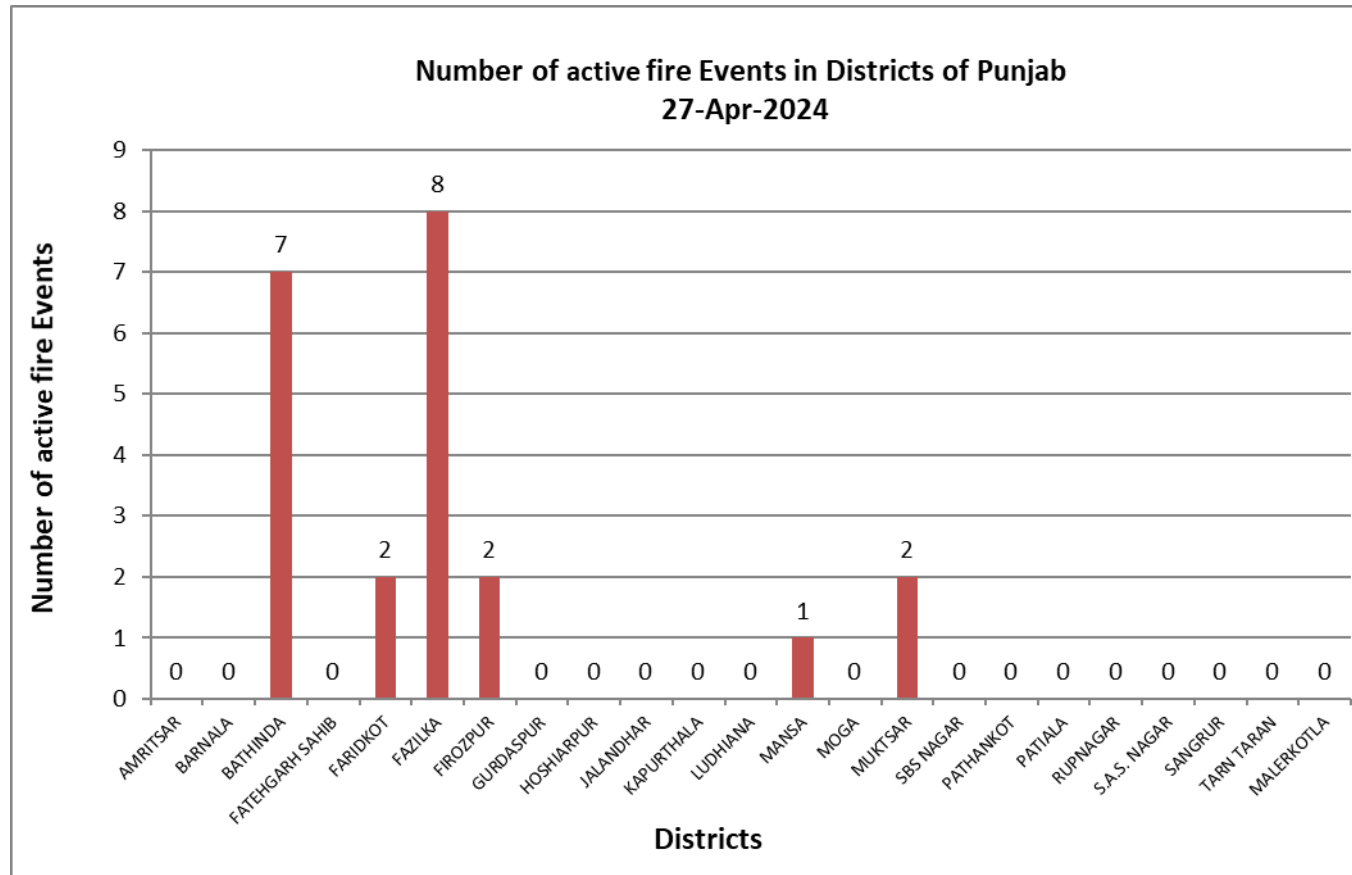


Fig. 1. District-wise fire incidents (Total events = 22) captured by Satellite in Punjab on 27 April 2024

On April, 27 2024, 22 active fire incidents were captured by the Satellite in state of Punjab.

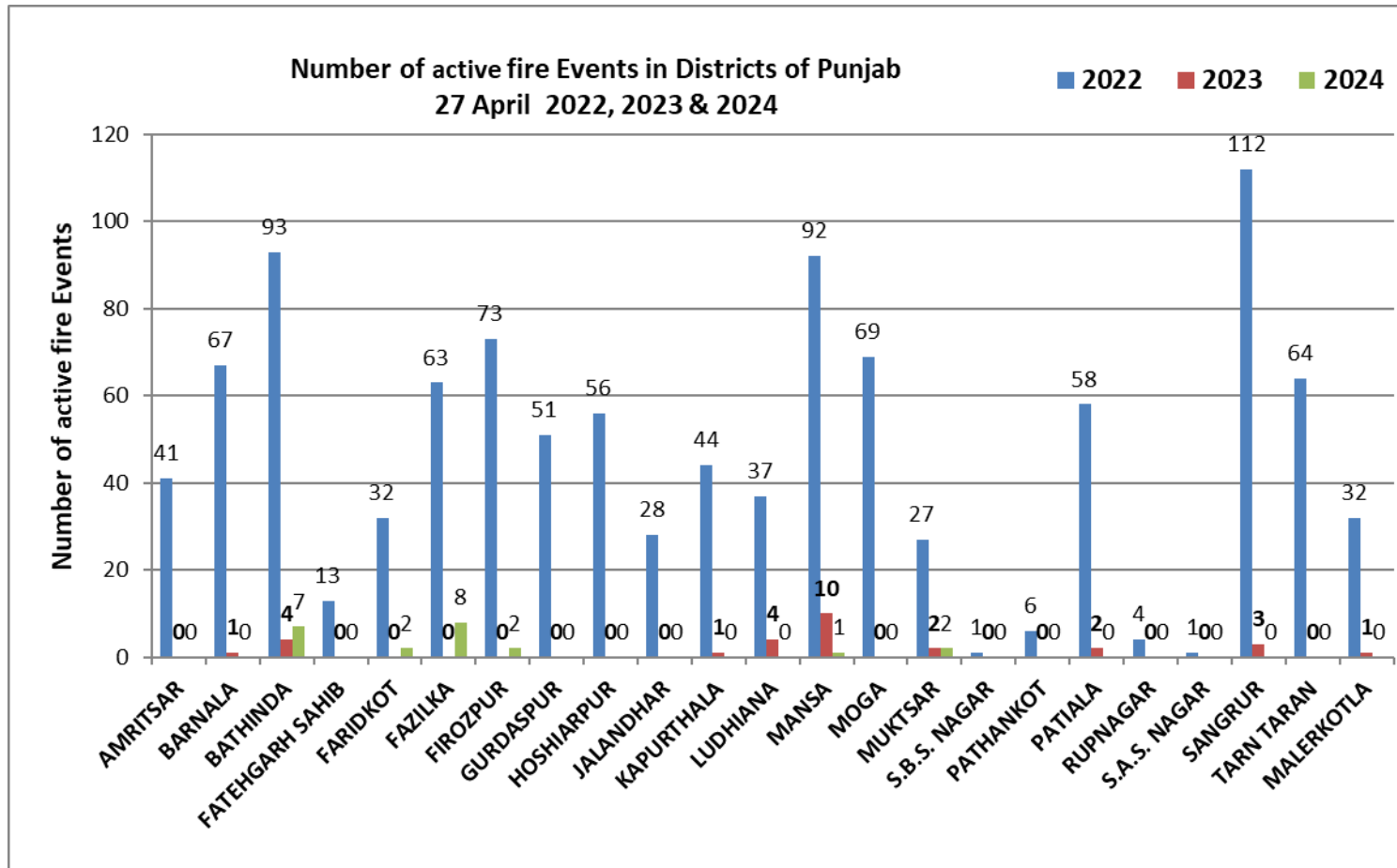


Fig 2 : District-wise comparison of fire incidents captured in Punjab on 27 April 2022, 2023 & 2024

On April, 27 2024, **22** active fire events were captured by the Satellite in state of Punjab. Whereas on the same day (i.e. April 27), in the year 2022, **1064** active fire events were captured and in the year 2023 there were **28** active fire events in state of Punjab.

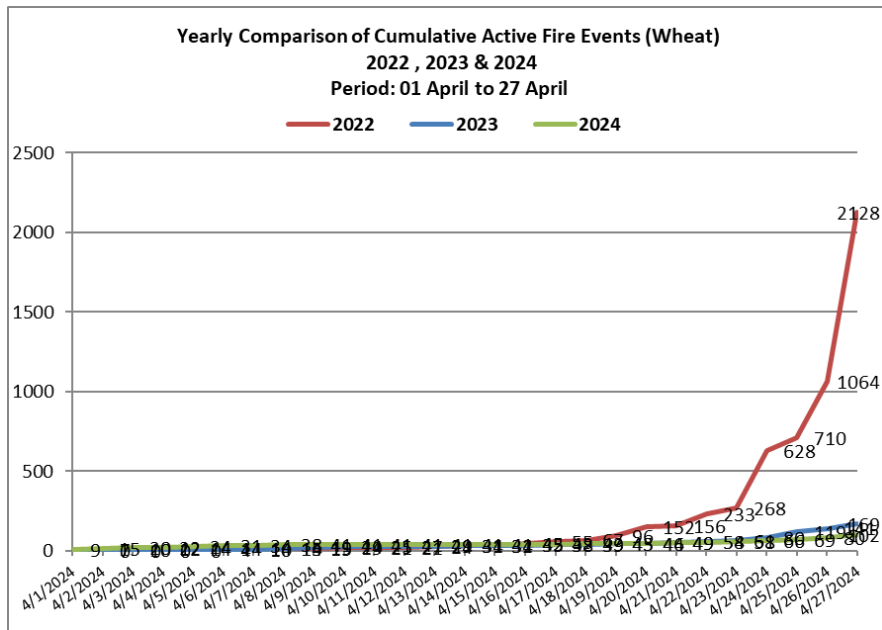


Fig 3 : Cumulative fire incidents captured in Punjab upto 27 April 2022, 2023 & 2024

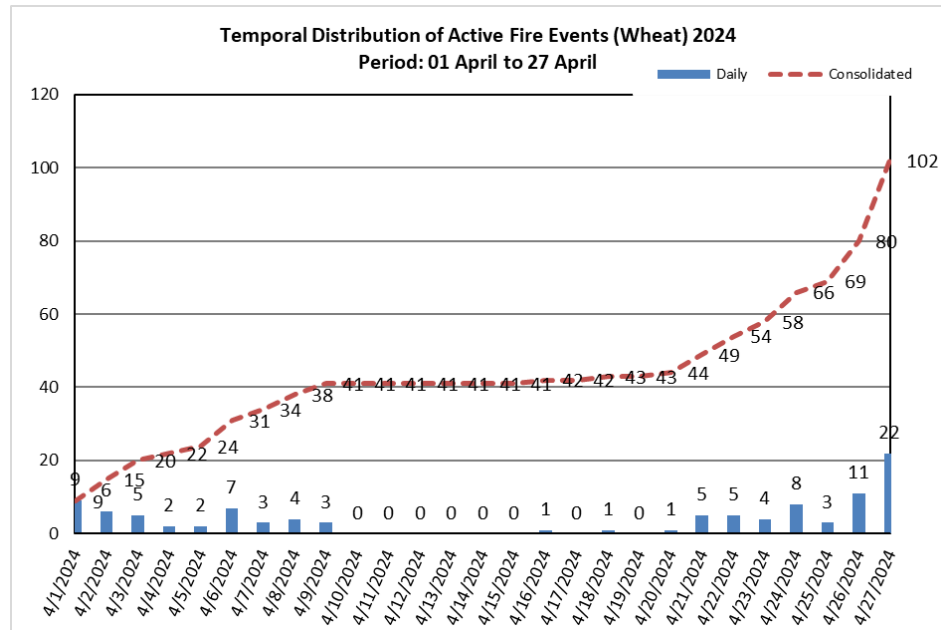
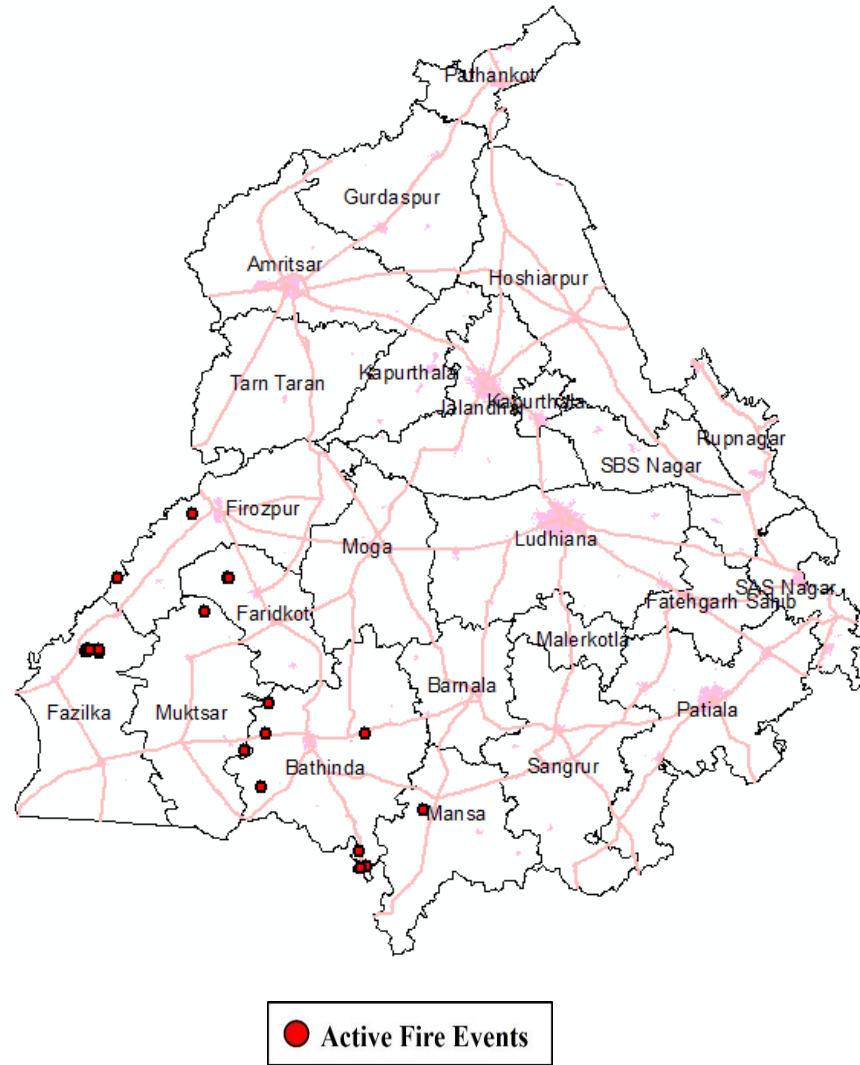


Fig 4: Date-wise Cumulative fire incidents captured in Punjab upto 27 April 2024



Map.1. Active fire locations detected in Punjab on 27 April 2024 by Satellite

Table.1. Active fire locations detected in Punjab on 27 April 2024 by Satellite

S.N.	Latitude	Longitude	Detection_Confidence	Radiative_power (W/m2)	sat	Acq-date	acqtime	District	Tehsil	Block	Village	Hadbast No	Thana
1	30.234910	74.788120	8	5.1	npp	4/27/2024	12:39:37 PM	Bathinda	Bathinda	Bathinda	Baluan a	77	Sadar Bathinda
2	30.330070	74.797240	8	3.0	npp	4/27/2024	2:19:54 PM	Bathinda	Bathinda	Goniana Mandi	Ablu	174	Nehianwala Bathinda
3	30.234810	75.145160	8	6.1	npp	4/27/2024	2:19:54 PM	Bathinda	Bathinda	Nathana	Lehra Khana	202	Nathana Bathinda
4	30.066740	74.770350	8	2.2	npp	4/27/2024	3:09:12 AM	Bathinda	Bathinda	Sangat	Baanddi	107	Sangat Bathinda
5	29.822920	75.151600	8	3.1	npp	4/27/2024	2:19:54 PM	Bathinda	Talwandi Sabo	Talwandi Sabo	Golewala	142	Talwandi Sabo Bathinda
6	29.817610	75.127750	8	5.6	npp	4/27/2024	12:39:37 PM	Bathinda	Talwandi Sabo	Talwandi Sabo	Kalawala	145	Talwandi Sabo Bathinda
7	29.869460	75.122920	8	3.0	npp	4/27/2024	2:19:54 PM	Bathinda	Talwandi Sabo	Talwandi Sabo	Mirjeana	136	Talwandi Sabo Bathinda
8	30.721500	74.647480	8	4.0	npp	4/27/2024	2:19:54 PM	Faridkot	Faridkot	Faridkot	Jhoti Wala	54	Sadar Fairdkot
9	30.721810	74.652340	8	4.0	npp	4/27/2024	2:19:54 PM	Faridkot	Faridkot	Faridkot	Jhoti Wala	54	Sadar Fairdkot
10	30.488480	74.186170	8	4.3	npp	4/27/2024	12:39:37 PM	Fazilka	Fazilka	Jalalabad	Hauj Gandharh	219	Sadar Fazilka
11	30.490910	74.142550	8	2.5	npp	4/27/2024	2:19:54 PM	Fazilka	Fazilka	Jalalabad	Tarobari	221	Sadar Fazilka
12	30.490610	74.138060	8	2.5	npp	4/27/2024	2:19:54 PM	Fazilka	Fazilka	Jalalabad	Tarobari	221	Sadar Fazilka

13	30.49663 0	74.142090	8	5.6	npp	4/27/202 4	2:19:54 PM	Fazilka	Fazilk a	Jalalaba d	Taroba ri	221	Sadar Fazilka
14	30.49693 0	74.146580	8	9.4	npp	4/27/202 4	2:19:54 PM	Fazilka	Fazilk a	Jalalaba d	Taroba ri	221	Sadar Fazilka
15	30.49723 0	74.151070	9	9.4	npp	4/27/202 4	2:19:54 PM	Fazilka	Fazilk a	Jalalaba d	Taroba ri	221	Sadar Fazilka
16	30.49115 0	74.184890	9	10.8	npp	4/27/202 4	12:39:3 7 PM	Fazilka	Jalala bad	Jalalaba d	Chak Lakho	228	Vairo Ke Fazilka
17	30.49461 0	74.184020	8	4.3	npp	4/27/202 4	12:39:3 7 PM	Fazilka	Jalala bad	Jalalaba d	Chak Punna	230	Vairo Ke Fazilka
18	30.92251 0	74.516990	8	5.6	npp	4/27/202 4	12:39:3 7 PM	Firozpur	Firozp ur	Mamdot	Kanda Wali	76	Mamdot Firozepur
19	30.71935 0	74.248990	8	4.6	npp	4/27/202 4	2:19:54 PM	Firozpur	Guruh ar Sahai	Guruhar Sahai	Rana Issa	320	Guru Harsahai Firozepur
20	29.99469 0	75.351540	8	0.8	npp	4/27/202 4	1:29:37 AM	Mansa	Mansa a	Mansa	Khokha r Kalan	75	Sadar Mansa
21	30.18210 0	74.710300	8	1.9	npp	4/27/202 4	12:39:3 7 PM	Muktsar	Gidde rbaha	Kot Bhai At Gidderb aha	Peori	6	Gidderbaha Sri Muktsar Sahib
22	30.61683 0	74.563620	8	4.7	npp	4/27/202 4	12:39:3 7 PM	Muktsar	Mukts ar	Muktsar	Seer Wali	149	Bariwala Sri Muktsar Sahib

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>