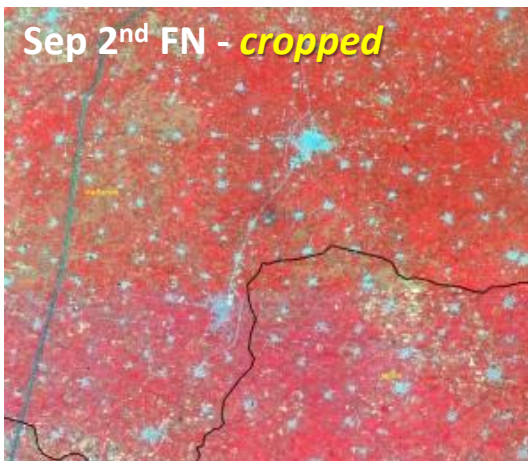


Assessment of paddy stubble burnt area progression over Punjab & Haryana– Kharif 2023

Agro-ecosystem and Modeling Division, Agricultural Sciences & Applications Group
Remote Sensing Applications Area, NRSC, ISRO, Hyderabad

The post-harvest burning of crop residues in the kharif season in northern Indian states is a serious challenge – both in terms of the pollution being caused as well as the resulting photochemical smog in the neighboring areas. Various measures by government for crop residue management have been addressing the issue but to a very limited extent. Need of the hour is the availability of a spatial information of stubble burnt area and its dynamics for monitoring, assessing and planning preventive measures. Moreover, the surplus biomass in the form of stubble can be gainfully used as input to biofuel plants. Near real time satellite based detection of active fire locations is being done from Suomi-NPP VIIRS.

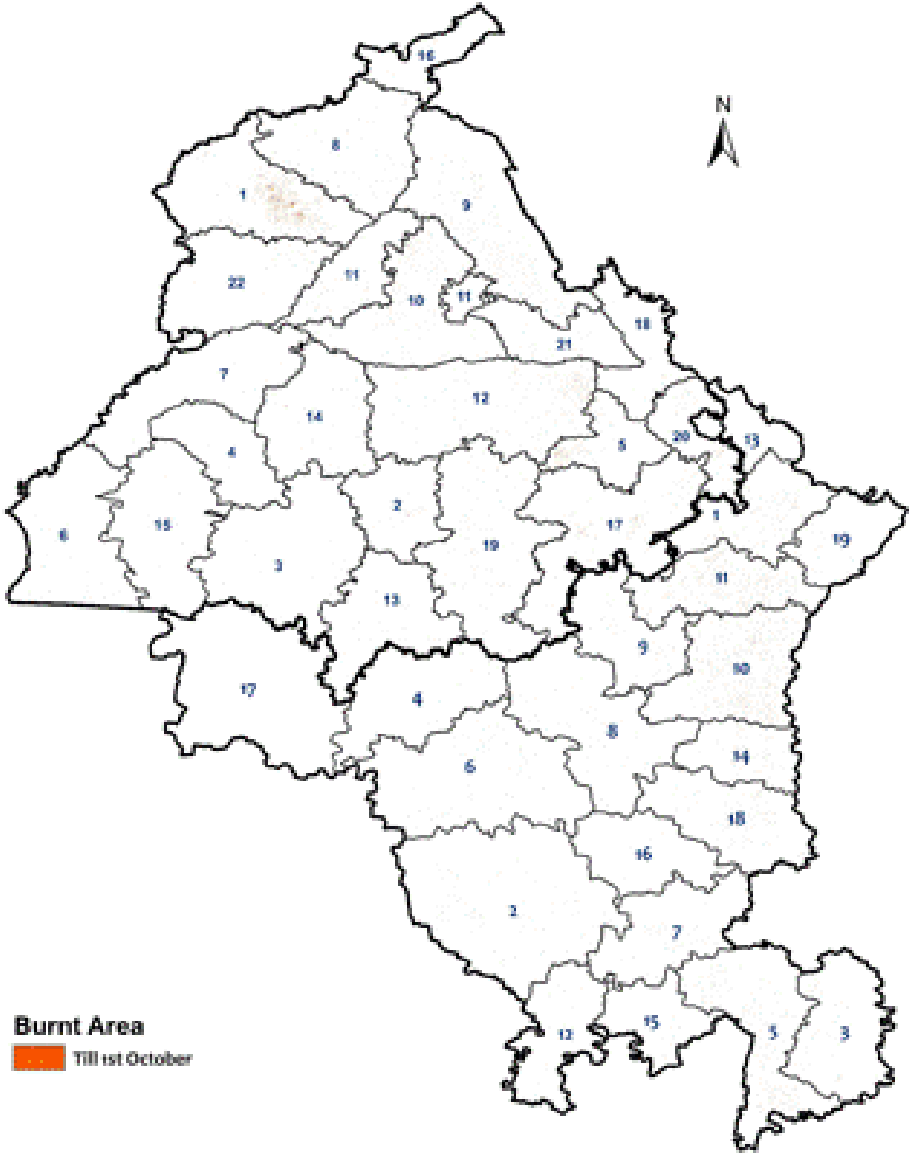
Continuous monitoring and assessment of the actual paddy stubble burnt areas and its weekly/fortnightly progression is being carried out for kharif 2023 for Punjab & Haryana states using the MIRBI (Mid Infrared Burn Index) index which utilizes a combination of two SWIR bands to estimate the burnt area. 10m and 5-day interval Sentinel-2 data starting from September 15, 2023 are being analyzed till 31st October, 2023.



**Agricultural
fires &
smoke seen
from
Sentinel-2**

Stubble Burning - 2023

Rice Stubble Burnt Area Map of Punjab & Haryana
Till 1st October, 2023



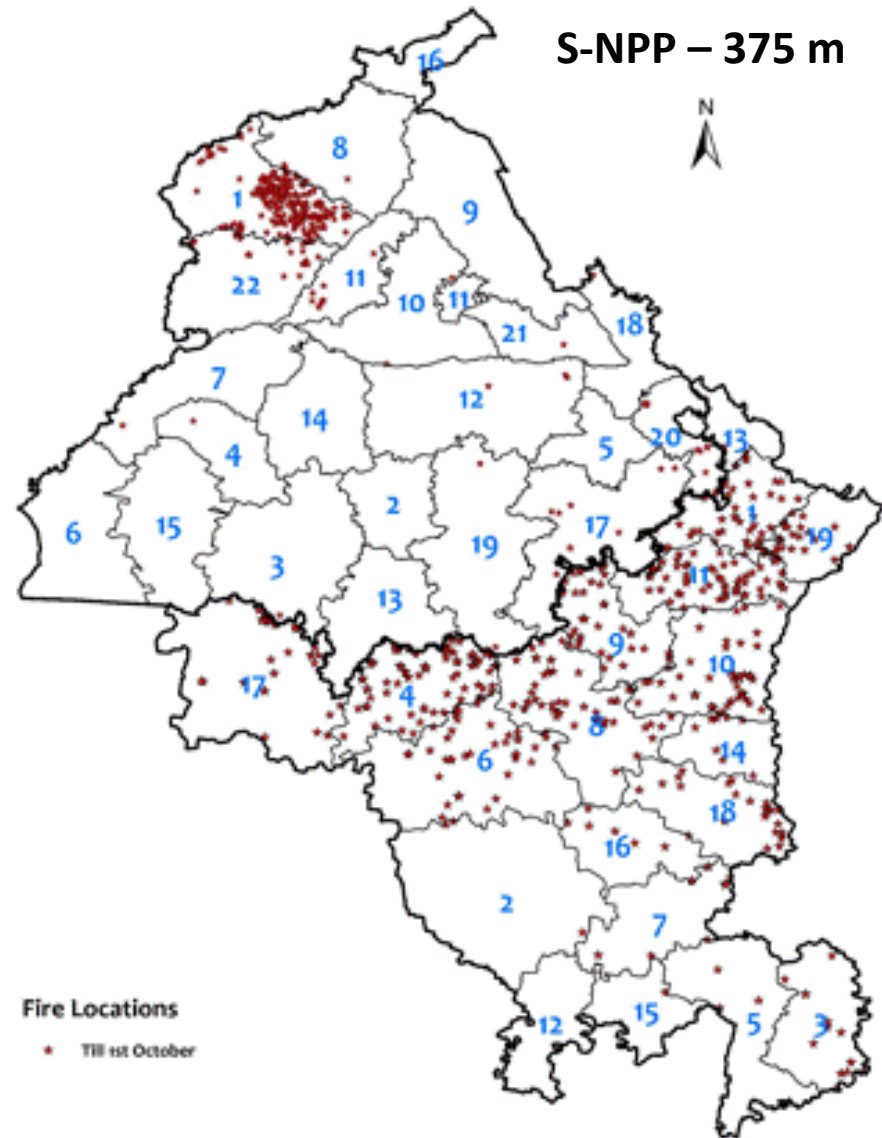
Punjab

Sr. No.	Districts
1	AMRITSAR
2	BARNALA
3	BATHINDA
4	FARIDKOT
5	FATEHGARH SAHIB
6	FAZILKA
7	FIROZPUR
8	GURDASPUR
9	HOSHIARPUR
10	JALANDHAR
11	KAPURTHALA
12	LUDHIANA
13	MANSI
14	MOGA
15	MUKTSAR
16	PATHANKOT
17	PATIALA
18	RUPNAGAR
19	SANGRUR
20	SAS NAGAR
21	SBS NAGAR
22	TARN TARAN

Haryana

Sr. No.	Districts
1	AMBALA
2	BHIWANI
3	FARIDABAD
4	FATEHABAD
5	GURGAON
6	HISAR
7	JHAJJAR
8	JIND
9	KAITHAL
10	KARNAL
11	KURUKSHETRA
12	MAHENDRAGARH
13	PANCHKULA
14	PANIPAT
15	REWARI
16	ROHTAK
17	SIRSA
18	SONIPAT
19	YAMUNANAGAR

Active Fire Location Map in Punjab & Haryana
Till 1st October, 2023

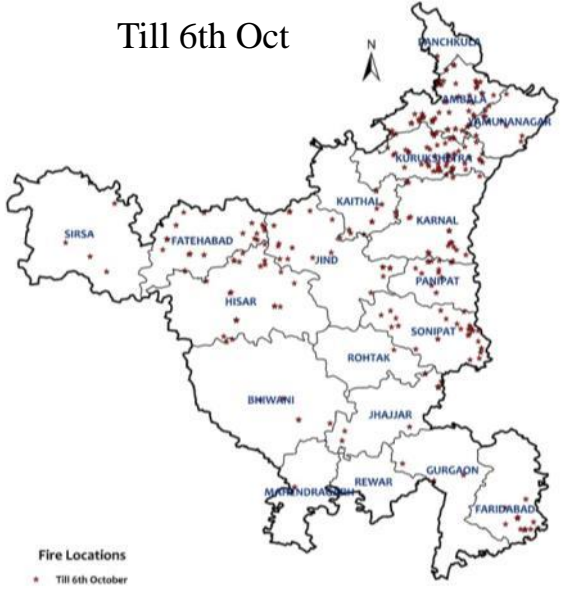


Number of Farm Fire Incidents in Haryana till 31st October,2023 (S-NPP)

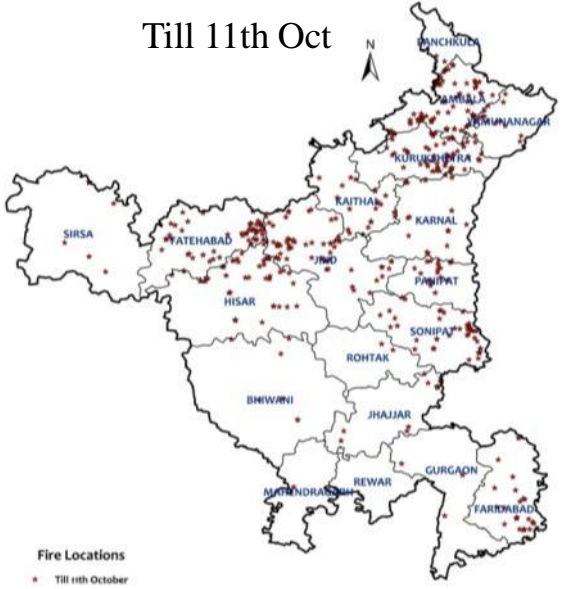
Till 1st Oct



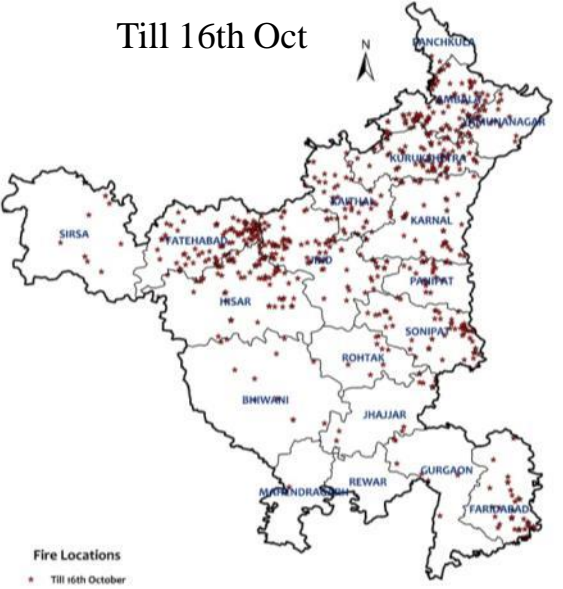
Till 6th Oct



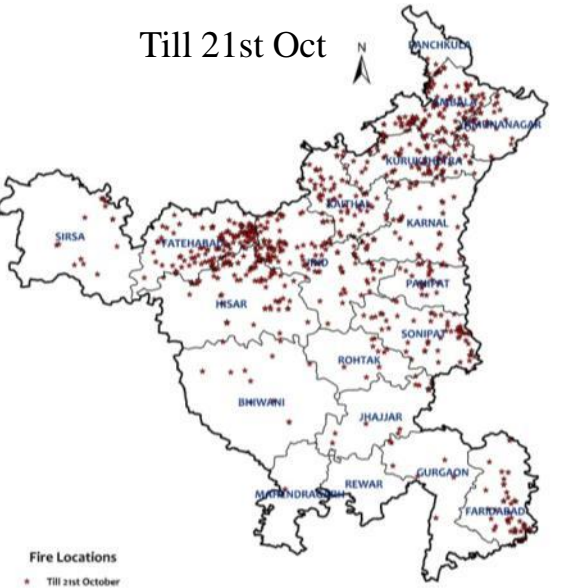
Till 11th Oct



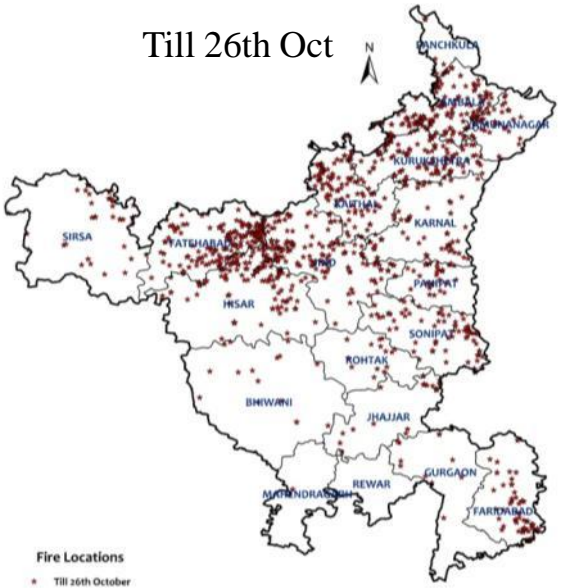
Till 16th Oct



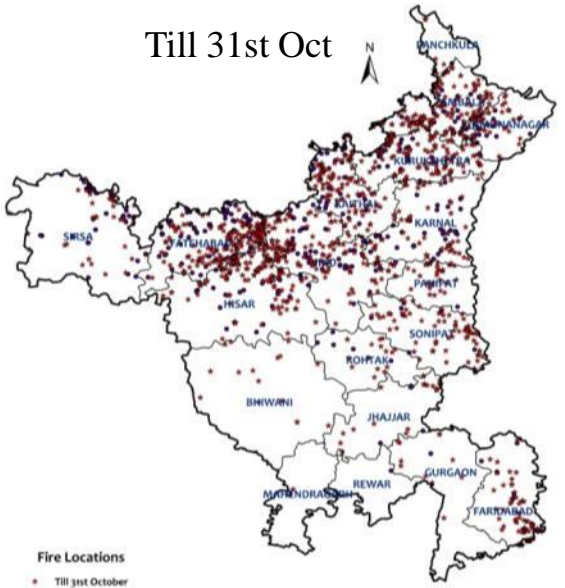
Till 21st Oct



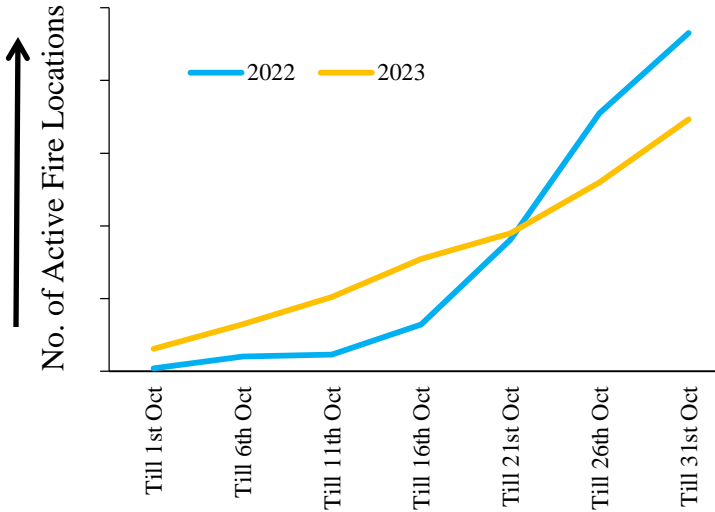
Till 26th Oct



Till 31st Oct



Progressive Active Fire Locations in Haryana

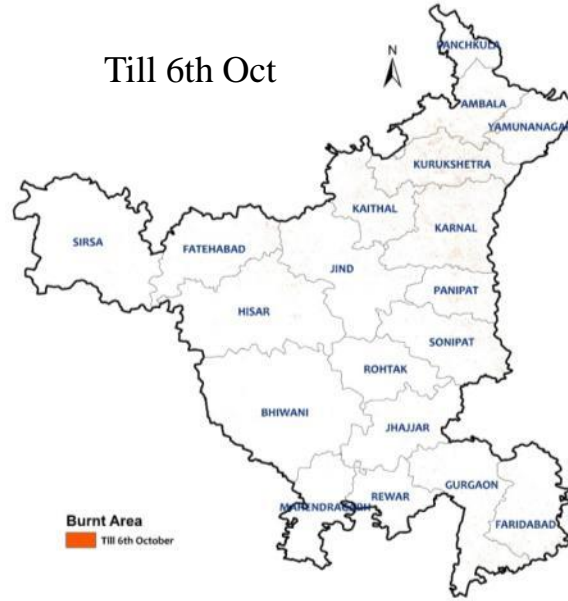


Cumulative Area Burnt in Haryana till Oct 31, 2023

Till 1st Oct



Till 6th Oct



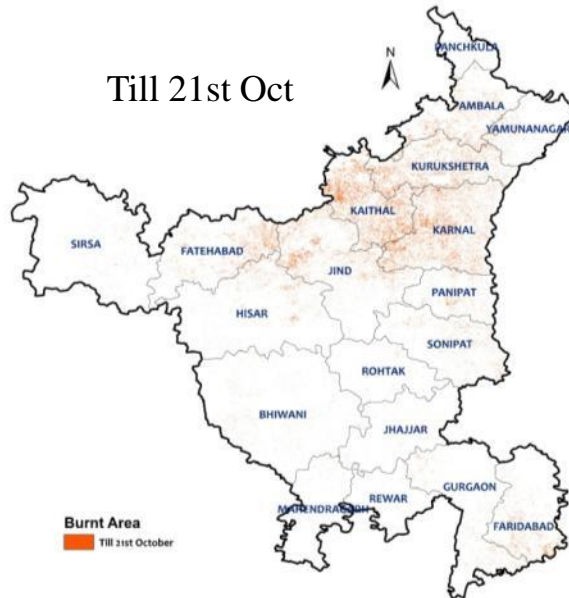
Till 11th Oct



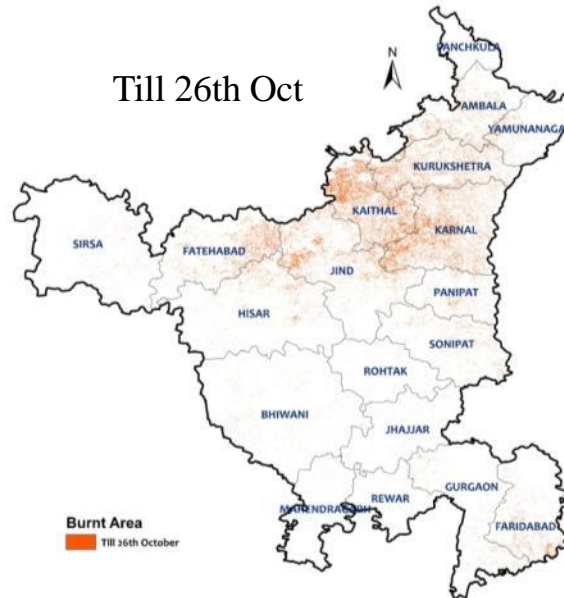
Till 16th Oct



Till 21st Oct



Till 26th Oct



Till 31st Oct

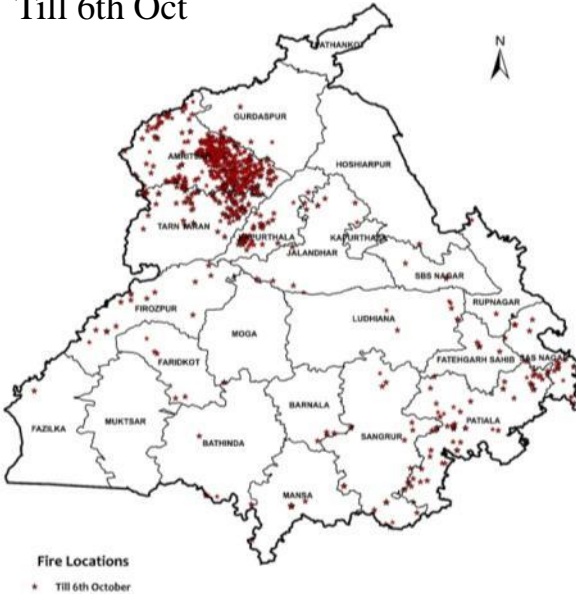


Number of Farm Fire Incidents in Punjab till 31st October,2023 (S-NPP)

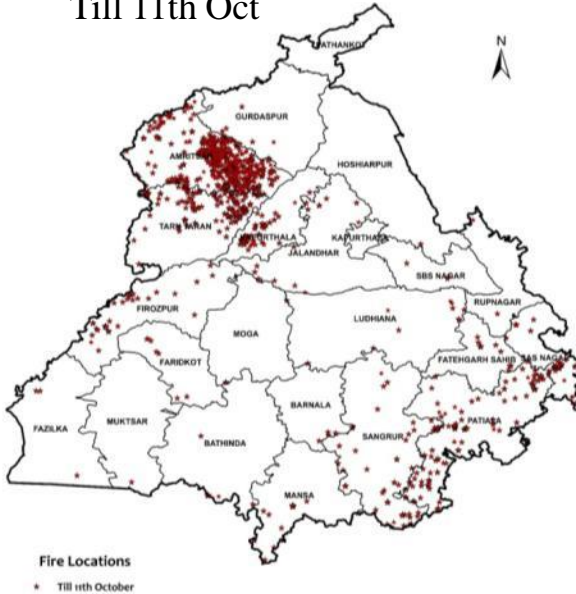
Till 1st Oct



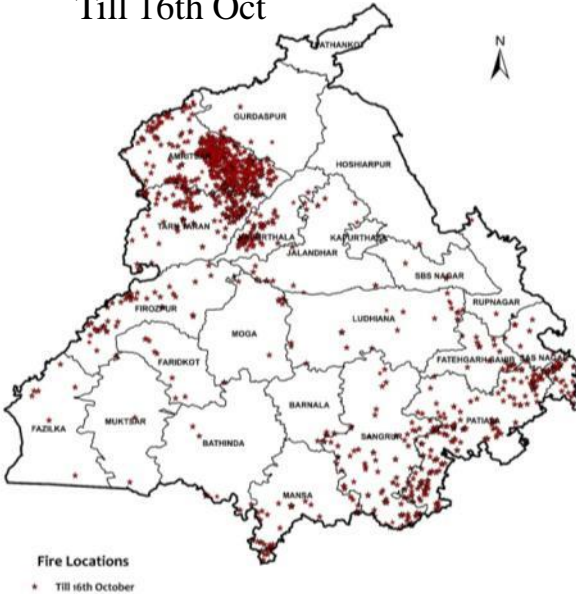
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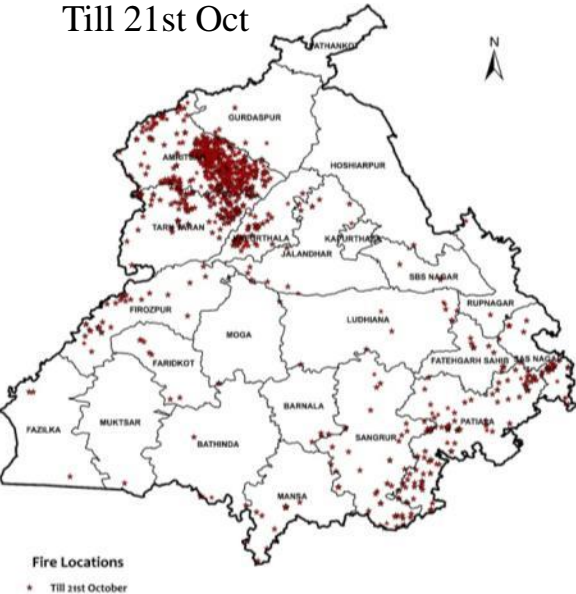
Till 11th Oct



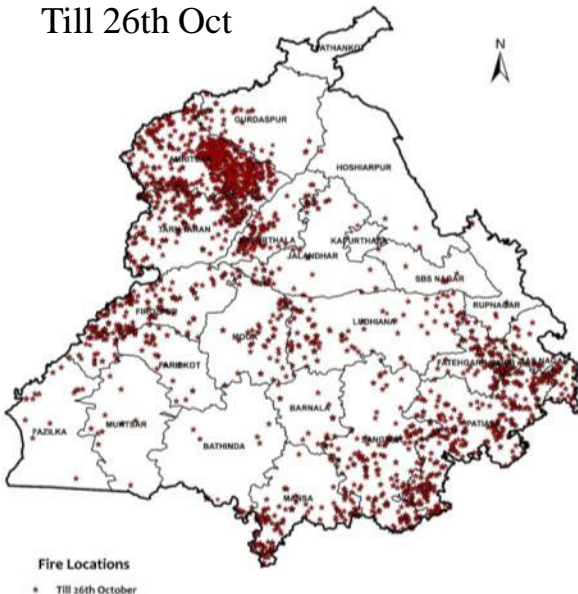
Till 16th Oct



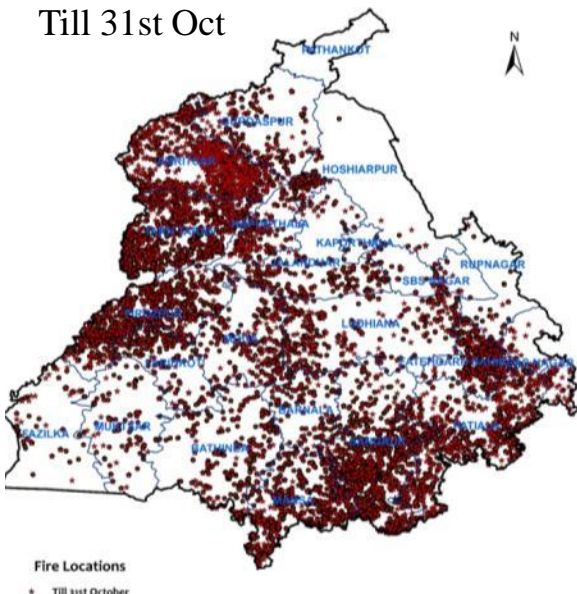
Till 21st Oct



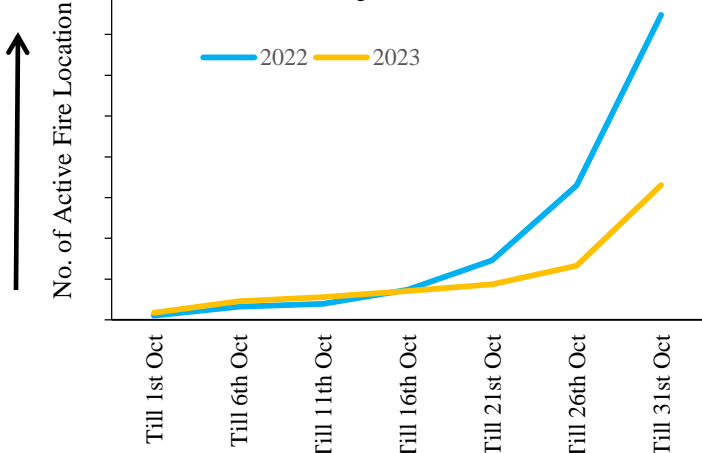
Till 26th Oct



Till 31st Oct



Progressive Active Fire Location in Punjab



Cumulative Burnt Area in Punjab till Oct 31, 2023

Till 1st Oct



Till 6th Oct



Till 11th O



Till 16th C



Till 21st Oct



Till 26th O



Till 31st O

