

THE IMPORTANCE OF SATELLITE MONITORING OF OPEN BURNING

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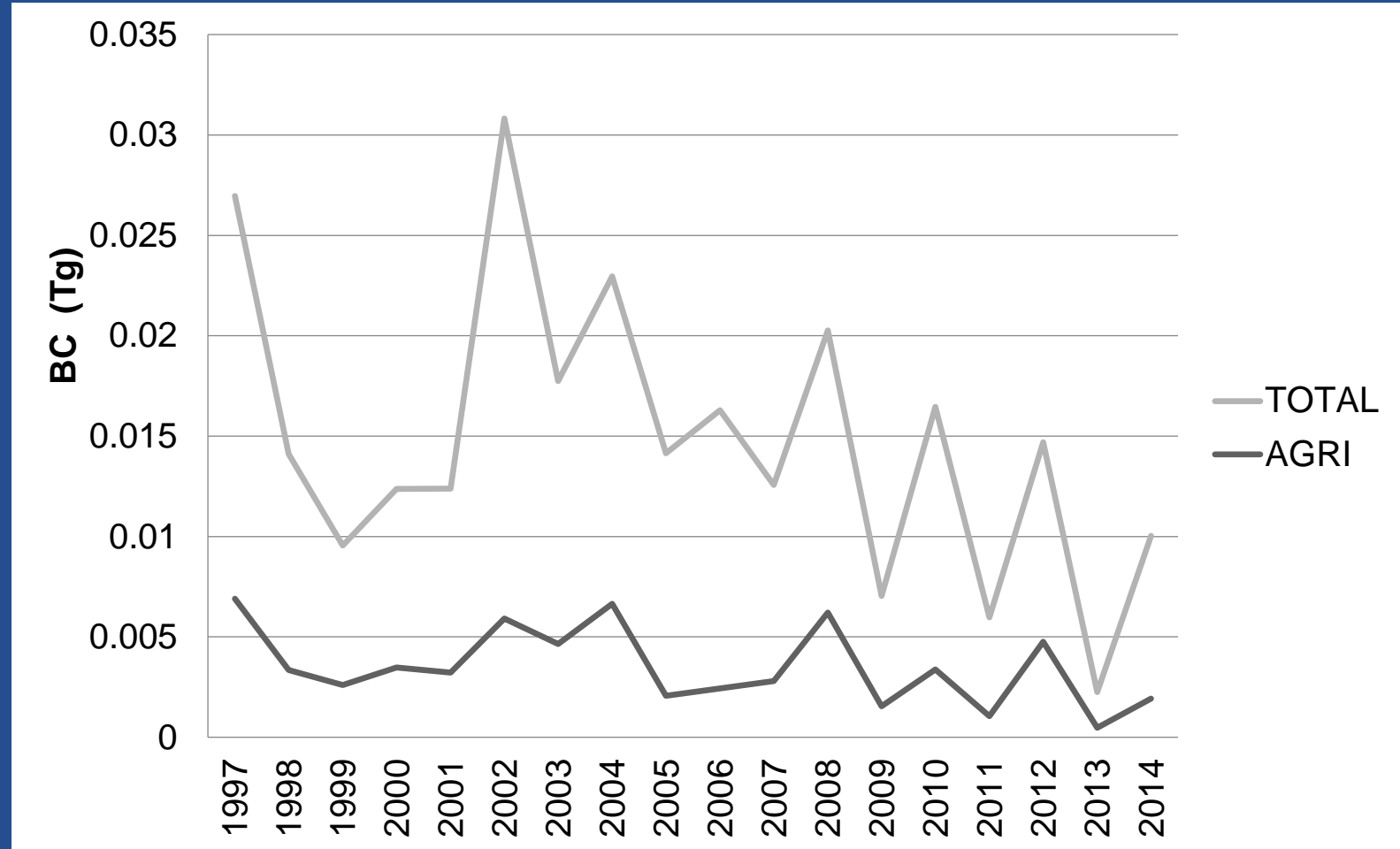
INTERNATIONAL CRYOSPHERE
CLIMATE INITIATIVE



WHY SATELLITE MONITORING?

GFED: Himalayas

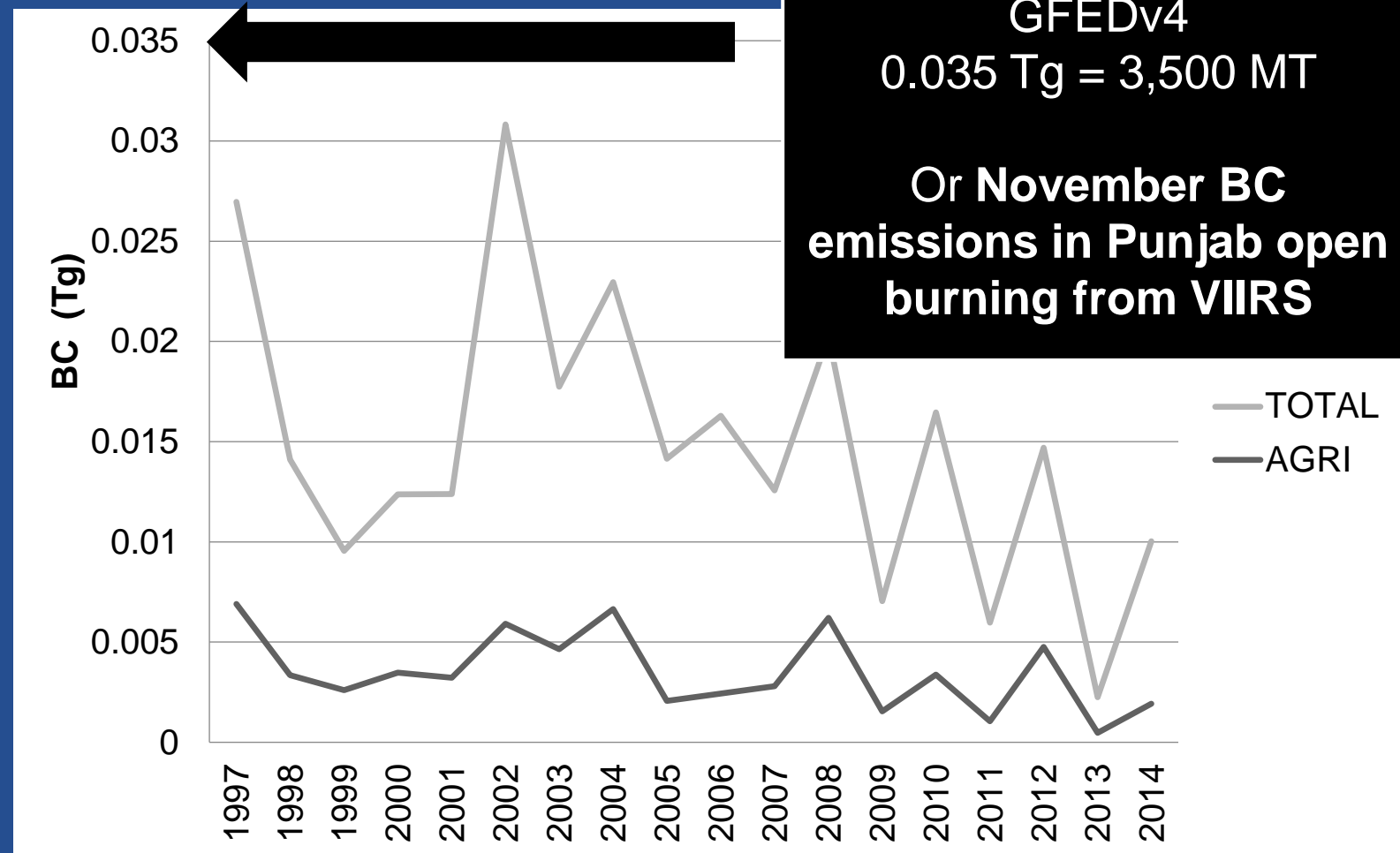
(India, Pakistan,
Nepal)



WHY SATELLITE MONITORING?

GFED: Himalayas

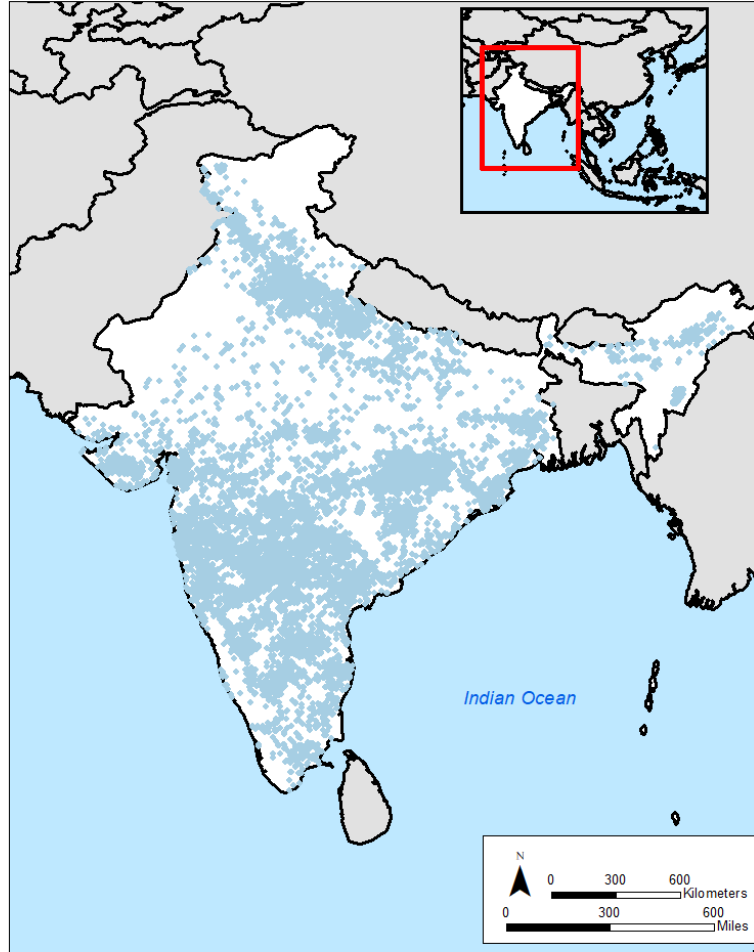
(India, Pakistan, Nepal)



DAILY FIRE DETECTIONS

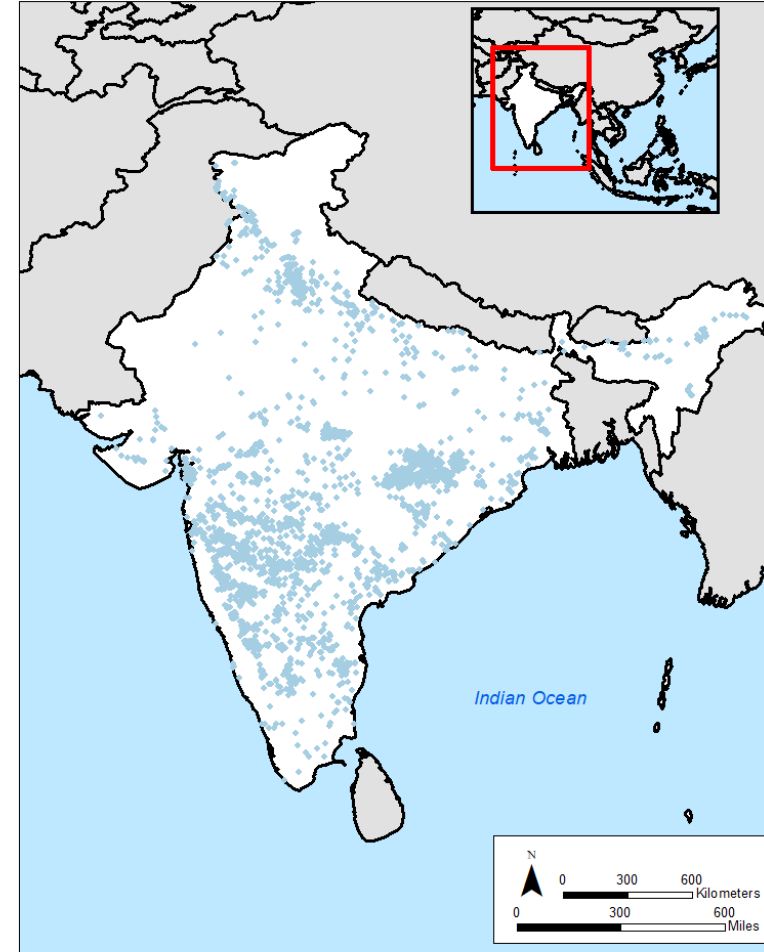
VIIRS Active Fire Detections in India

JAN 2018 Detected Agricultural Fires; Total Fires = 24,907



MODIS Active Fire Detections in India

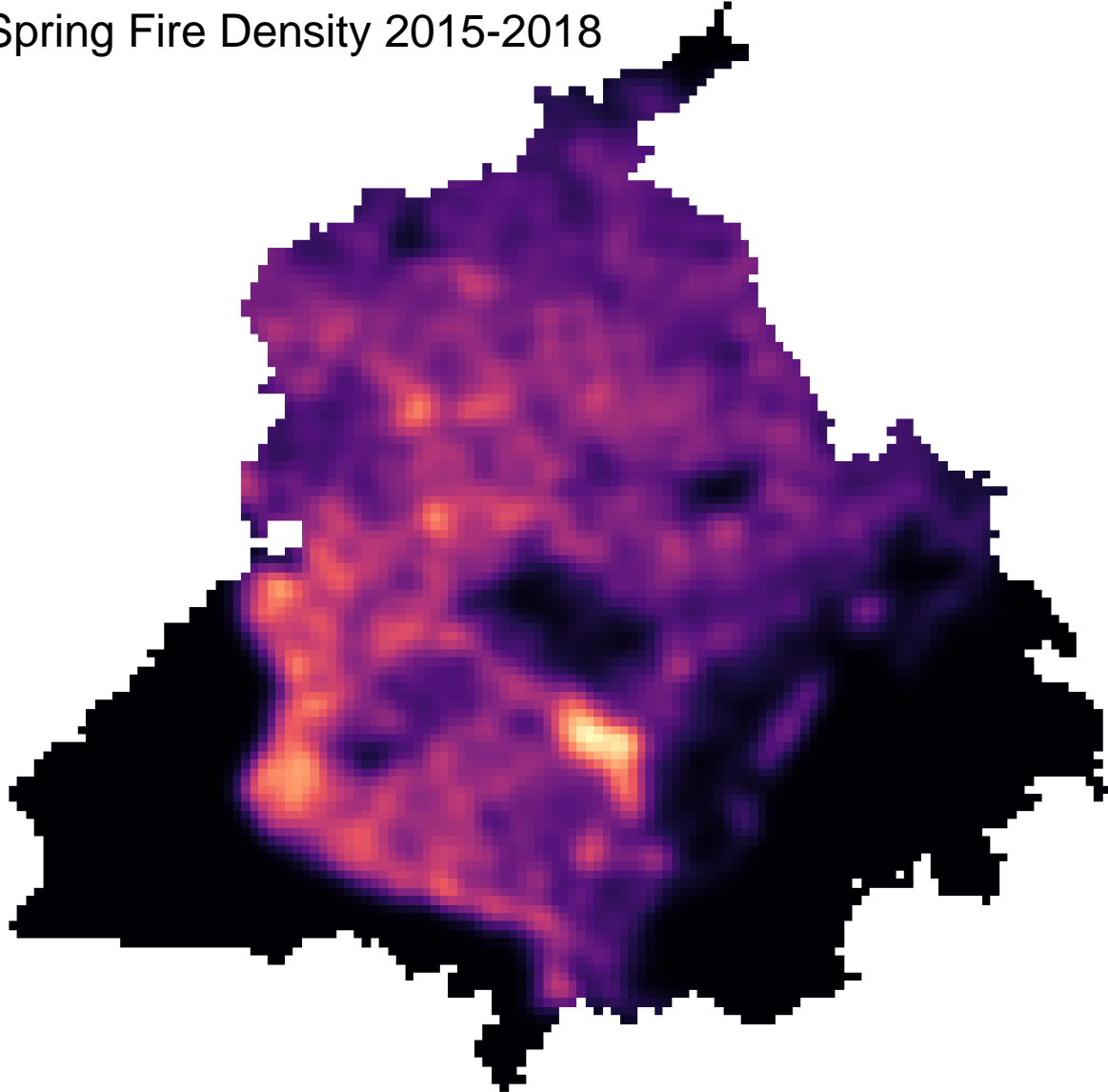
JAN 2018 Detected Agricultural Fires; Total Fires = 3,689



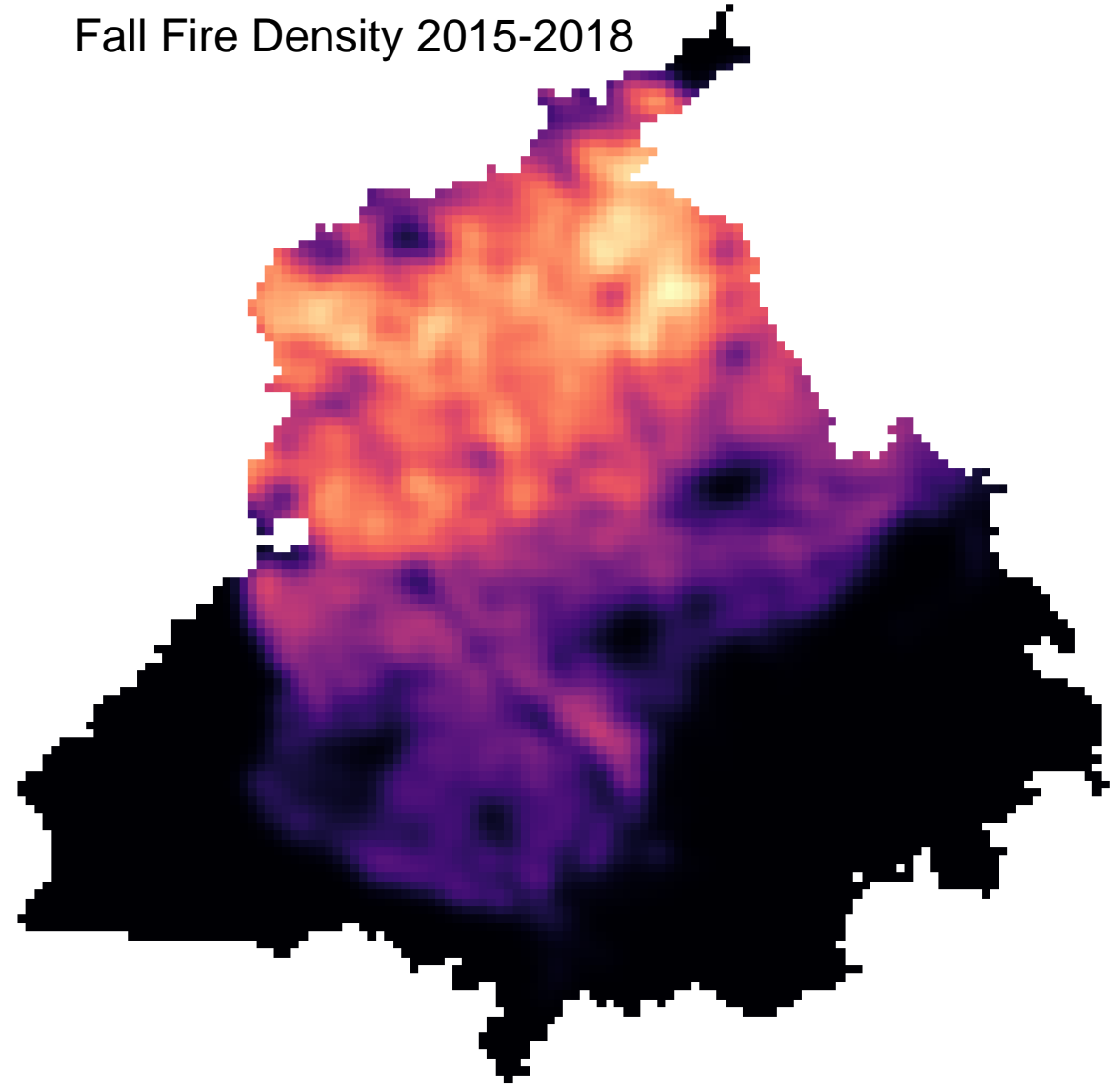
6.75 times more fires detected
by VIIRS than MODIS for India

GEOSPATIAL ANALYTICS

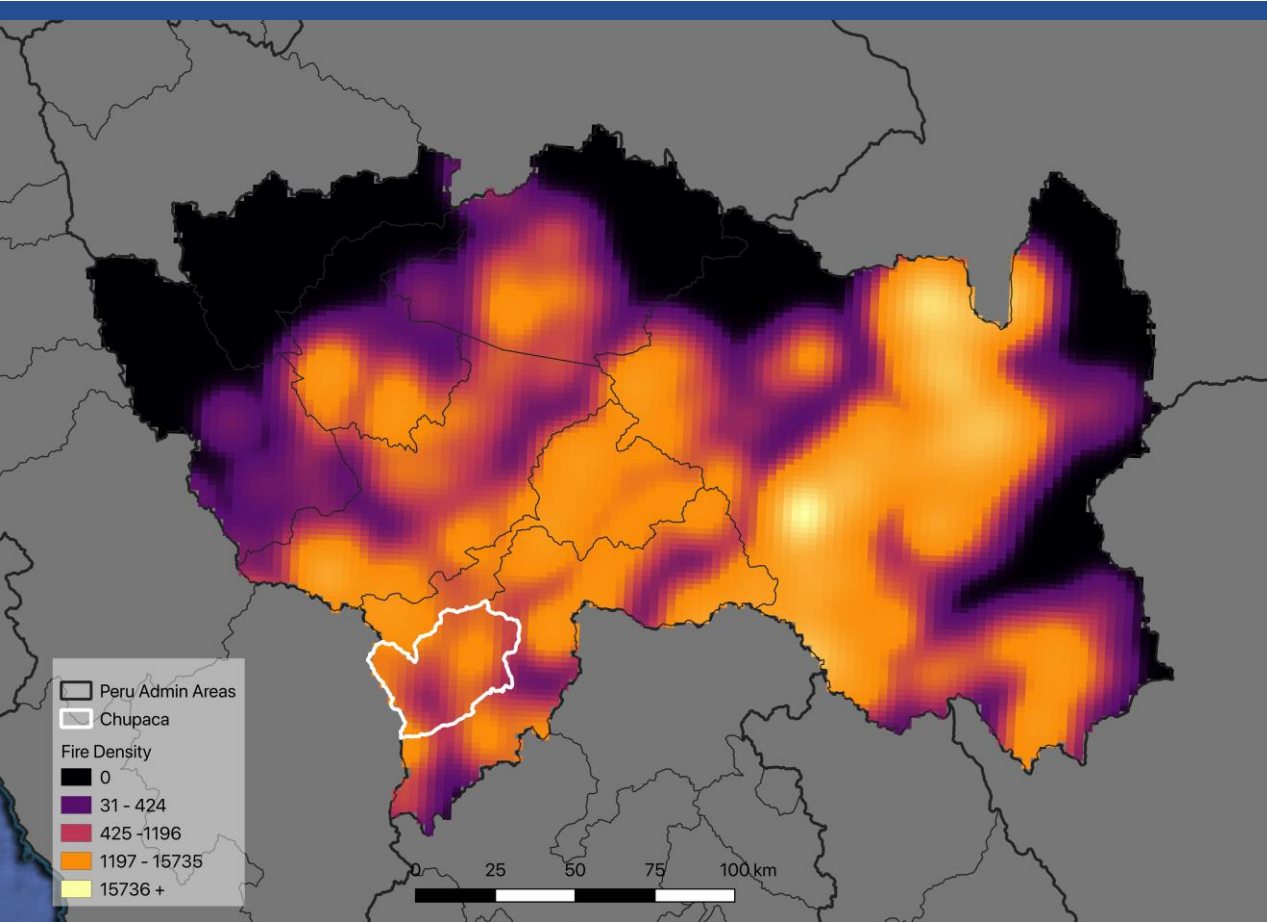
Spring Fire Density 2015-2018



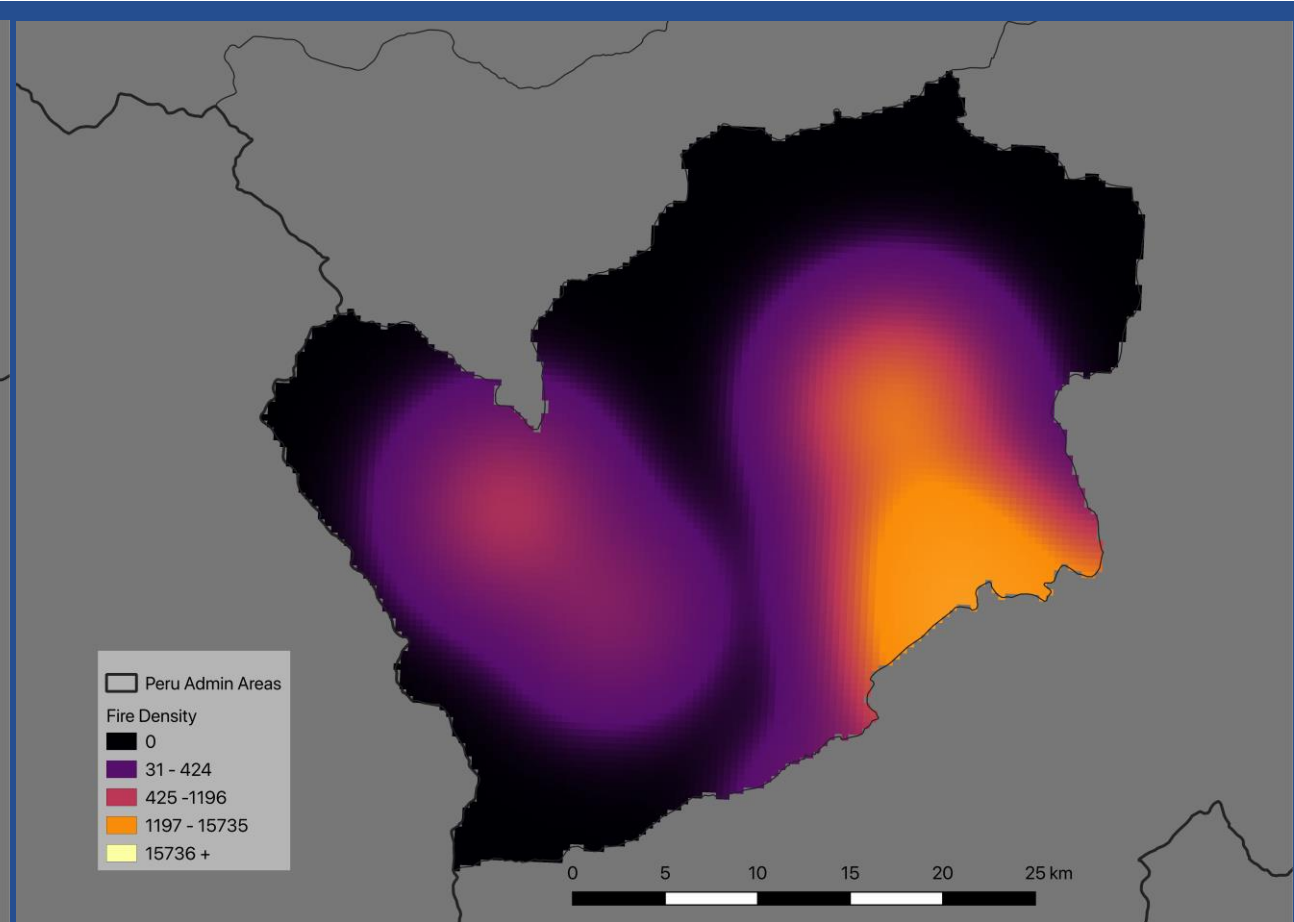
Fall Fire Density 2015-2018



ASSESSING SUCCESS OF INTERVENTION

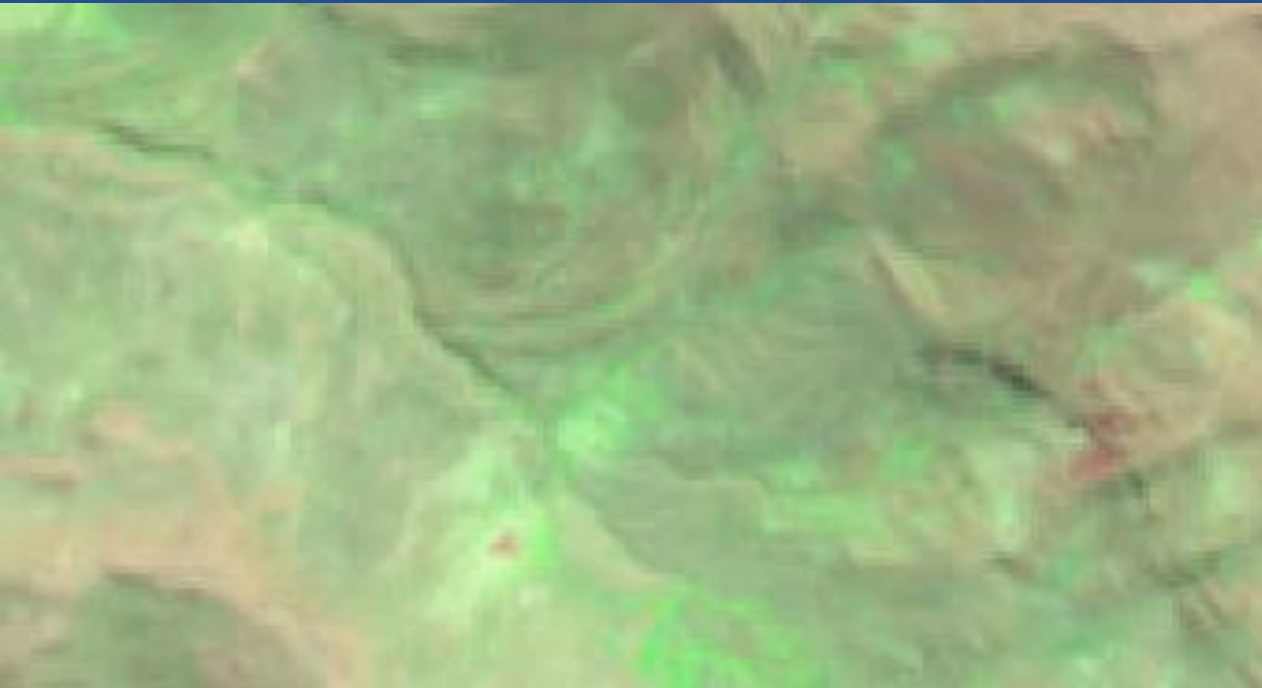


Junín Fire Density

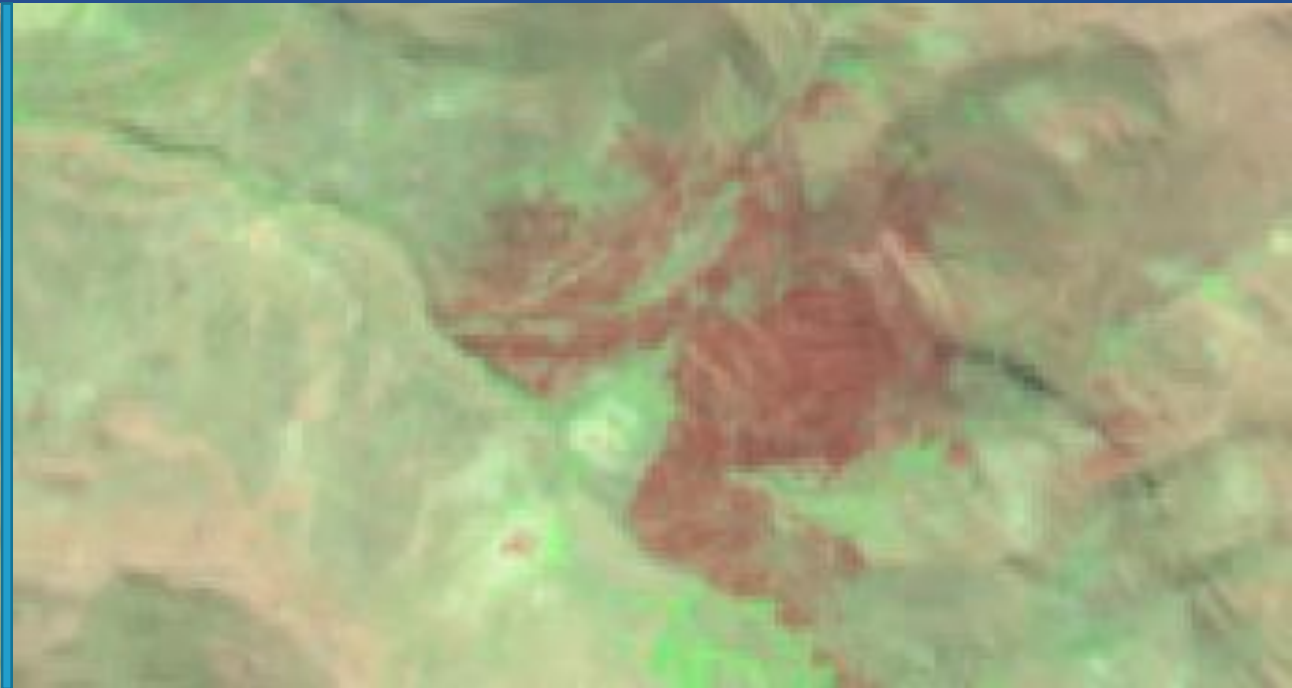


Chupaca Fire Density

RANGELAND BURNED AREA: PERU



Sentinel 2 Pre-Burn
Chupaca (-12.17827, -75.32947)
5 July 2019



Sentinel 2 Post-Burn
Chupaca (-12.17827, -75.32947)
25 July 2019

CROPLAND BURNED AREA: PERU



CROPLAND BURNED AREA: PERU



WHY BOTHER?

- Working with experts and farmers:

On-the-ground knowledge to interpret global-scale emissions models

- Who, What, When, Where
 - Verified by higher resolution satellite data

hindustantimes UN experts visit three stubble burning-free villages in Amritsar

UN-PAU PROJECT Villages adopted for not burning crop residue



HT Correspondent

■ letterschd@hindustantimes.com

AMRITSAR: Experts from United Nations Environment Programme (UNEP) and the Food and Agriculture Organisation (FAO) on Thursday visited three villages of the district which were declared as stubble burning-free and adopted under 'Climate and Clean Air Coalition' (CCAC) project a year ago.

This is a joint project of UNEP-CCAC and Punjab Agricultural Management and Extension Training Institute (PAMETI), PAU, Ludhiana. Rajjian, Bhio-wali and Qiampur villages were adopted under the project as its farmers do not indulge in burning



■ A team of the United Nations with farmers at Rajjian village in Amritsar on Thursday.

SAMEER SEHGAL/HT PHOTO

NODAL OFFICERS IN 8,000 VILLAGES TO CHECK FARM FIRES

CHANDIGARH: The Punjab government has decided to depute nodal officers in nearly 8,000 paddy growing

dem to check this menace. The nodal officers will also undertake various activities, ranging from holding

Fire activity and black carbon emissions increased in all of India and Punjab ***BUT DECREASED IN INTERVENTION VILLAGES***

Black Carbon Emissions (in metric tonnes) for Punjab State, India from VIIRS Open Burning

	2013	2014	2015	2016	2017	2018	2019
JAN	22	14	13	5	12	19	8
FEB	18	21	21	38	37	25	10
MAR	37	14	20	18	24	28	22
APR	33	13	22	192	50	50	18
MAY	1,172	1,323	974	849	933	1,079	1,432

Black Carbon Emissions (in metric tonnes) for India from VIIRS Open Burning

	2013	2014	2015	2016	2017	2018	2019
JAN	337	318	345	315	371	509	494
FEB	343	396	481	504	490	571	472
MAR	634	605	636	744	610	1,067	635
APR	821	977	800	1,248	1,223	1,085	1,211
MAY	1,779	1,909	1,559	1,206	1,527	1,728	2,579





MAY 2019



30.204103° N, 75.803603° E

×

2019/04/01 - 2019/05/18

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99 % area coverage

5 images

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99 % area coverage

5 images

May 12, 2019 04:30:50 UTC

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May 11, 2019 05:15:25 UTC

4-band PlanetScope Scene (3 m)

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30.20° N, 75.80° E

15

500 m

