



MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2020



Final Districtwise Paddy Residue Burning Statistics for Punjab and Haryana (2020) Final Statewise Monthly Crop Residue Burning Events Detected (2020)

A) Punjab

Final estimates based on rice area, burnt area and straw burnt estimated by using high resolution multispectral satellite images

District-wise Paddy Area Burnt and Paddy Straw Burnt in Punjab in 2020

District	Rice Area ('000 ha)	Burnt Area ('000 ha)	Burnt Area (%)	Total Straw Production ('000' tons)	Actual Straw Burned ('000 tons)	Straw Burned (%)
AMRITSAR	193.14	84.97	44.00	1271.21	502.24	39.51
BARNALA	122.76	70.39	57.34	1167.39	601.11	51.49
BATHINDA	164.47	60.19	36.60	1538.72	505.72	32.87
FARIDKOT	115.85	70.68	61.02	973.06	533.16	54.79
FATEHGARH SAHIB	74.62	45.04	60.36	725.35	393.18	54.21
FAZILKA	113.40	30.70	27.07	824.49	200.44	24.31
FIROZPUR	170.44	110.95	65.10	1488.02	869.84	58.46
GURDASPUR	166.87	110.17	66.02	1096.24	649.93	59.29
HOSHIARPUR	62.73	18.85	30.06	502.15	135.53	26.99
JALANDHAR	178.63	117.05	65.52	1516.01	892.02	58.84
KAPURTHALA	108.27	78.81	72.79	914.71	597.92	65.37
LUDHIANA	252.84	156.90	62.05	2512.63	1400.14	55.72
MANSA	105.95	39.98	37.73	938.41	317.96	33.88
MOGA	141.10	77.76	55.11	1335.08	660.71	49.49
MUKTSAR	175.68	76.05	43.29	1465.12	569.55	38.87
PATHANKOT	30.13	3.00	9.96	171.03	15.29	8.94
PATIALA	225.05	158.62	70.48	1970.15	1246.93	63.29
RUPNAGAR	38.32	1.24	3.25	357.98	10.44	2.92
SANGRUR	270.70	203.58	75.20	2723.29	1839.14	67.53
SAS NAGAR	28.68	8.36	29.15	213.86	55.98	26.18
SBS Nagar (Nawanshahr)	58.10	9.33	16.05	519.67	74.90	14.41
TARN TARAN	179.74	126.21	70.22	1224.67	772.24	63.06
Total	2977.49	1658.85	55.71	25449.23	12844.37	50.47

B) Haryana

Final estimates based on rice area, burnt area and straw burnt estimated by using high resolution multispectral satellite images.

District-wise Paddy Area Burnt and Paddy Straw Burnt in Haryana in 2020

District	Rice Area ('000 ha)	Burnt Area ('000 ha)	Burnt Area (%)	Total Straw Production (000' tons)	Actual Straw Burned ('000 tons)	Straw Burned (%)
AMBALA	94.29	12.21	12.95	778.43	90.54	11.63
BHIWANI	24.26	0.34	1.39	114.04	1.43	1.25
CHARKHI DADRI	6.20	0.00	0.00	29.15	0.00	0.00
FARIDABAD	10.34	0.77	7.43	64.00	4.27	6.67
FATEHABAD	110.66	23.43	21.18	913.59	173.74	19.02
GURGAON	5.27	0.27	5.21	36.26	1.70	4.68
HISAR	65.03	3.51	5.40	423.08	20.52	4.85
JHAJJAR	36.06	0.48	1.34	193.52	2.32	1.20
JIND	125.57	15.00	11.94	725.72	77.82	10.72
KAITHAL	155.84	30.39	19.50	1125.80	197.13	17.51
KARNAL	166.73	51.50	30.89	1231.97	341.72	27.74
KURUKSHETRA	133.87	30.22	22.57	1147.78	232.64	20.27
MAHENDRAGARH	0.00	0.00	00.00	0.00	0.00	0.00
MEWAT	7.60	0.67	8.86	53.35	4.24	7.95
PALWAL	35.05	5.65	16.11	217.03	31.39	14.46
PANCHKULA	10.21	0.17	1.69	79.06	1.20	1.52
PANIPAT	79.63	16.09	20.21	493.07	89.49	18.15
REWARI	3.17	0.18	5.68	22.92	1.17	5.10
ROHTAK	39.21	2.18	5.56	193.34	9.65	4.99
SIRSA	95.64	5.35	5.59	778.82	39.12	5.02
SONEPAT	103.15	13.97	13.55	594.13	72.27	12.16
YAMUNANAGAR	64.32	3.92	6.09	530.99	29.05	5.47
Total	1372.11	216.31	15.76	9746.04	1421.42	14.58

(C) All India Monthly Crop Residue Burning Events Detected by Satellites in 2020

STATE	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Total 2020
ANDAMAN & NICOBAR	1	0	0	0	0	1	0	0	0	0	0	0	2
ANDHRA PRADESH	208	216	469	660	2080	98	14	6	17	41	137	661	4607
ARUNACHAL PRADESH	1	10	9	4	2	0	0	0	2	4	0	3	35
ASSAM	117	86	23	2	4	2	0	4	7	25	13	14	297
BIHAR	75	79	38	576	886	21	3	4	0	92	971	1620	4365
CHANDIGARH	0	0	0	0	0	0	0	0	0	0	0	0	0
CHHATTISGARH	649	291	91	155	299	490	1	0	0	26	930	5003	7935
DADAR & NAGAR HAVELI	0	0	0	2	3	0	0	0	0	0	0	0	5
DAMAN & DIU	0	0	0	0	0	0	0	0	0	0	0	0	0
DELHI	1	2	3	9	14	1	0	1	1	8	1	3	44
GOA	3	0	0	0	2	0	0	0	0	0	0	1	6
GUJARAT	239	376	998	947	227	55	3	6	2	140	349	190	3532
HARYANA	91	166	104	158	2549	31	3	5	130	3038	2640	435	9350
HIMACHAL PRADESH	0	1	2	0	13	2	1	0	0	10	7	0	36
JAMMU & KASHMIR	3	1	2	1	94	2	1	1	0	24	27	8	164
JHARKHAND	9	14	27	73	0	0	0	0	1	6	17	51	198
KARNATAKA	2094	1821	1408	637	535	23	2	8	11	38	820	3260	10657
KERALA	3	9	21	63	10	0	0	0	0	1	6	0	113
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0	0	0	0
MADHYA PRADESH	273	240	467	27875	7948	130	6	3	16	2987	8901	613	49459
MAHARASHTRA	1959	1784	1453	1277	517	39	1	6	7	107	1333	2239	10722
MANIPUR	4	1	2	0	0	0	0	0	2	0	11	6	26
MEGHALAYA	0	1	5	0	0	0	0	0	0	0	0	0	6
MIZORAM	0	0	1	0	0	0	0	0	0	0	0	0	1
NAGALAND	0	2	2	0	0	0	0	0	0	0	0	0	4
ODISHA	445	286	172	82	44	124	1	0	10	19	47	1064	2294
PUDUCHERRY	0	0	0	2	1	0	0	0	0	0	0	0	3
PUNJAB	183	366	194	85	11194	363	170	1	866	30704	48389	407	92922
RAJASTHAN	24	78	21	2751	3487	35	13	14	4	667	978	70	8142
SIKKIM	0	0	0	1	0	0	0	0	0	0	0	0	1
TAMIL NADU	104	377	743	595	201	101	37	46	31	255	41	49	2580
TELANGANA	410	541	928	777	2512	114	6	2	7	49	1600	1899	8845
TRIPURA	0	0	1	0	0	0	0	0	0	0	0	0	1
UTTAR PRADESH	363	828	384	1427	3192	106	15	30	31	1082	3577	2454	13489
UTTARAKHAND	8	53	34	52	151	4	1	1	2	667	214	75	1262
WEST BENGAL	287	69	197	553	8	4	1	0	2	33	170	1380	2704
TOTAL	7554	7698	7799	38764	35973	1746	279	138	1149	40023	71179	21505	233807

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GIS Maps of burning events can be visualized online: <http://geoportal.icar.gov.in:8080/geoexplorer/composer/>