

Supplementary Information

COVID 19 Lockdown - Air Quality Reflections in Indian Cities

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Table S1: City wise average concentration during Pre –lockdown and Lockdown Period

Sr. No	List of Cities (Short form of State-cityaw)	Population	Zone	PM _{2.5} Concentration ($\mu\text{g}/\text{m}^3$)			NO _x Concentration ($\mu\text{g}/\text{m}^3$)		
				Pre-Lockdown	Lockdown	Difference (%)	Pre-Lockdown	Lockdown	Difference (%)
1	PB - BHATINDA	285788	North	31	18	-40	62	62	-0.1
2	PB - AMRITSAR	1132383	North	31	20	-36	52	54	3
3	PB - LUDHIANA	1618879	North	35	17	-52	99	48	-51
4	PB - PATIALA	406192	North	26	16	-38	22	12	-42
5	HR - NARNAUL	74581	North	39	25	-36			
6	HR - PALWAL	128730	North	54	44	-18	73	43	-42
7	HR - KARNAL	286827	North	52	36	-32	31	10	-66
8	HR - PANIPAT	294292	North	52	34	-34	128	51	-60
9	HR - HISAR	301383	North	51	35	-31	34	19	-44
10	HR - ROHTAK	374292	North	55	36	-35			
11	HR - GURUGRAM	876969	North	51	34	-33	84	31	-63
12	HR - FARIDABAD	1414050	North	61	34	-44			
13	DL-Delhi	11034555	North	63	43	-32	59	25	-57
14	RJ - ALWAR	315379	North	43	23	-46	80	57	-28
15	RJ - JODHPUR	1033756	North	74	48	-34	107	42	-60
16	RJ - JAIPUR	3046163	North	32	22	-33	71	26	-64
17	UP - NOIDA	637272	North	59	36	-39	50	14	-71
18	UP - AGRA	1585704	North	56	43	-23	87	64	-27

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19	UP - GHAZIABAD	1648643	North	81	43	-47	85	32	-62
20	UP - KANPUR	2765348	North	60	48	-20	62	26	-58
21	UP - LUCKNOW	2817105	North	96	67	-30	58	20	-65
22	BI - GAYA	468614	East	55	46	-16	13	9	-35
23	UP - VARANASI	1198491	East	60	54	-10	27	29	9
24	WB - SILGURI	513264	East	70	61	-14	137	66	-52
25	AS-GUWAHATI	957352	East	83	78	-6	50	17	-66
26	WB - KOLKATA	4496694	East	59	31	-48	124	30	-76
27	MP - PITAMPUR	126200	Centre	34	38	10	19	13	-27
28	MP- KATNI	222000	Centre	42	31	-25	47	23	-51
29	MP - DEWAS	289550	Centre	41	49	19	32	20	-36
30	MH - CHANDARPUR	320379	Centre	33	37	14	19	18	-6
31	MP - UJJAIN	515215	Centre	40	46	15	24	14	-41
32	MP-BHOPAL	1798218	Centre	34	36	5	32	15	-53
33	MH - NAGPUR	2405665	Centre	31	23	-26	68	27	-60
34	RJ - UDAIPUR	451100	West	39	26	-34	59	24	-59
35	GJ - AHMEDABAD	5577940	West	51	32	-37	47	30	-36
36	MH - SOLARPUR	951558	West	35	32	-10	90	14	-84
37	MH - AURANGABAD	1175116	West	35	23	-34	16	15	-5
38	MH - PUNE	3124458	West	50	31	-38	47	26	-46
39	MH - MUMBAI	12442373	West	34	25	-26	66	21	-68
40	AP - AMRAVATI	647057	South	22	21	-3	12	7	-42
41	KER- TRIVEND	743691	South	25	15	-40	31	16	-48
42	KR - HUBLI	943147	South	28	25	-10	78	52	-33
43	AP - VISHAKAPATNAM	1728128	South	31	21	-33	43	48	13
44	TN - CHENNAI	4646732	South	35	22	-36	41	24	-42
45	TEL - HYDERABAD	6731790	South	30	29	-2	24	21	-10
46	KR - BANGLURU	8443675	South	48	27	-43	45	18	-61

Note: PB: Punjab, HR: Haryana, DL: Delhi, RJ: Rajasthan, UP: Uttar Pradesh, BI- Bihar, WB- West Bengal, As- Assam, MP- Madhya Pradesh, MH- Maharashtra, GJ- Gujrat, AP- Andra Pradesh, TEL- Telengana, KER- Kerala, KR- Karnataka, TN- Tamil Nadu,

Table S2: Site features of 58 Stations considered in the present study

Sr. No.	CAAQMS Name	Population	Zone	Dominant Land use	Second Dominant Land use	Category
1	PB - BHATINDA	285788.00	North	Cement Plant	Traffic	1
2	PB - AMRITSAR	1132383.00	North	Residential	Commercial	1
3	PB - LUDHIANA	1618879.00	North	Open Area/ Green	Residential	0
4	PB - PATIALA	406192.00	North	Residential	Commercial	2
5	HR - NARNAUL	74581.00	North	Open Area	Residential/Green	0
6	HR - PALWAL	128730.00	North	Residential	Traffic	2
7	HR - KARNAL	286827.00	North	Open Area/ Green	Residential	0
8	HR - PANIPAT	294292.00	North	Traffic	Residential	1
9	HR - HISAR	301383.00	North	Open /Green Area	Residential	0
10	HR - ROHTAK	374292.00	North	Green area	Residential	0
11	HR - GURUGRAM	876969.00	North	Residential	Commercial	2
12	HR - FARIDABAD	1414050.00	North	Traffic	Residential	1
13	DL- ALIPUR	11034555.00	North	Open Area	Residential	0
14	DL- AYANAGAR	11034555.00	North	Residential	Open Area	2
15	DL- MANDIRMARG	11034555.00	North	Traffic	Residential	1
16	DL - MUNDKA	11034555.00	North	Traffic	Industrial	1
17	DL - NEHRUNAGAR	11034555.00	North	Residential	Traffic	1
18	DL - RKPURAM	11034555.00	North	Residential	Traffic	1
19	DL-NAJAFGARH	11034555.00	North	Green Area	Open Area/scattered Residential	0
20	RJ - ALWAR	315379.00	North	Residential	Commercial	2
21	RJ - JODHPUR	1033756.00	North	Traffic	Commercial	2
22	RJ - JAIPUR	3046163.00	North	Traffic	Residential	1
23	UP - NOIDA	637272.00	North	Traffic	Residential	1
24	UP - GHAZIABAD	1648643.00	North	Traffic	Residential	1
25	UP - AGRA	1585704.00	North	Commercial	Residential	2
26	UP - KANPUR	2765348.00	North	Traffic	Residential	1
27	UP - LUCKNOW	2817105.00	North	Traffic	Residential	1
28	BI - GAYA	468614.00	East	Commercial	Residential	1
29	UP - VARANASI	1198491.00	East	Residential	Commercial	2
30	WB - SILGURI	513264.00	East	Residential	Green Area	2
31	AS-GUWAHATI	957352.00	East	Residential	Commercial	2
32	WB - KOLKATA	4496694.00	East	Residential	Open Area	2
33	WB-HAWARA	4496694.00	East	residential	Commercial	2
34	MP - PITHAMPUR	126200.00	Central	Industrial Area	Open Area	1
35	MP- KATNI	222000.00	Central	Traffic	Commercial	1
36	MP - DEWAS	289550.00	Central	Traffic	Residential	1

37	MH - CHANDRAPUR	320379.00	Central	Industrial Area	Open Land	2
38	MP - UJJAIN	515215.00	Central	Residential	Commercial	1
39	MP-BHOPAL	1798218.00	Central	Traffic	Commercial	1
40	MH - NAGPUR	2405665.00	Central	Green area	Residential	0
41	RJ - UDAIPUR	451100.00	West	Residential	Commercial	2
42	MH - SOLAPUR	951558.00	West	Traffic	Industrial	1
43	MH - AURANGABAD	1175116.00	West	Traffic	Industries	1
44	MH - PUNE	3124458.00	West	Residential	Commercial	2
45	GJ - AHMEDABAD	5577940.00	West	Traffic	Residential	1
46	MH - MUMBAI	12442373.00	West	Commercial	Residential	2
47	MH- MUMBAI - Powai	12442373.00	West	Green Area	Residential	0
48	MH- MUMBAI - Colaba	12442373.00	West	Green Area	Residential	0
49	AP - AMRAVATI	647057.00	South	Rural area, Open field	Green area	0
50	KER - TRIVEND	743691.00	South	Green area	Residential	0
51	KR - HUBLI	943788.00	South	Traffic	Residential	1
52	AP - VISHAKAPATNAM	1728128.00	South	Traffic	Residential	2
53	TN - CHENNAI	4646732.00	South	Industrial Area	Commercial	1
54	TEL - HYDERABAD	6731790.00	South	Industrial Area	Commercial	2
55	TL-HYDERABAD-CU	6731790.00	South	Open Area	Residential	0
56	KR - BENGALURU	8443675.00	South	Residential	Open Area	1
57	KR-BANGALURU-BWS	8443675.00	South	Residential	Commercial	2
58	KR-BANLURUR_Pennaya	8443675.00	South	Residential	Open filed	2

Note: 0 – Background Station, 1- Traffic/Industrial Stations, 2 – Residential/Commercial Stations