

Air Pollution – Brief Analysis for January 2023

Below is a brief representation of data captured by portable devices installed in multiple locations in Korba, Delhi and Ranchi. The analysis has been done for two reporting periods – 1 January to 31 January 2023 and Jan 2022 to January 2023

Section 1 – Data Analysis for period Jan to January 2023

Monthly Average AQI - Different Cities													
	Jan-22	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-23
Korba	268	202	217	206	110	123	80	91	106	173	262	222	259
Delhi	330	224	188	139	114	80	76	86	96	257	359	333	396
Ranchi							158	89	91	174	153	333	

Monthly Average AQI Values - Different Cities

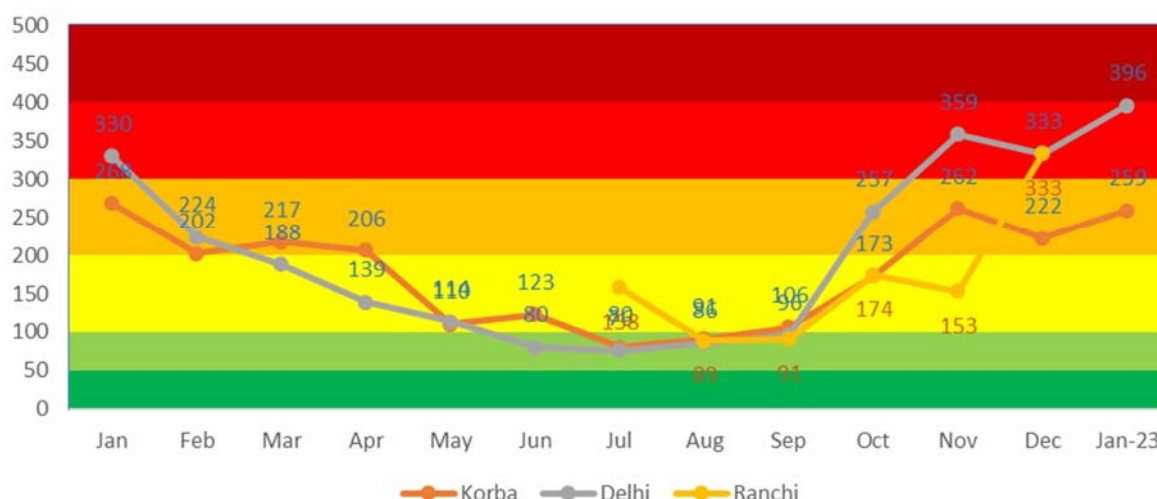


Table and Graph above show the Average Monthly AQI in different Cities. The graph and data clearly showcase the winter months when AQI comes under dangerous levels and summer and monsoon months when the air quality is Satisfactory. It is clear that AQI is showing an increasing trend with the onset of winter. During this period, Delhi recorded the worst AQI in the month of January 2023. Out of 13 months, for 9-months AQI in Delhi was above 100 while Korba had AQI above 100 for 11 months. January 2023 Air quality has decreased over the previous month figures. The overall data for Korba shows that Korba Air is more polluted than Delhi for longer durations in the year. January 2023 AQI is higher in Delhi while it has improved in Korba over January 2022. The different colour bands in the graph respond to the AQI categories as stated in the NAAQs (More later in the document)

Monthly Average HI - Different Cities													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-23
Korba	19	24	29	36	40	39	37	35	35	30	23	21	21
Delhi	17	20	26	32	35	36	39	37	36	28	24	18	16
Ranchi							31	30	29	24	20	18	-

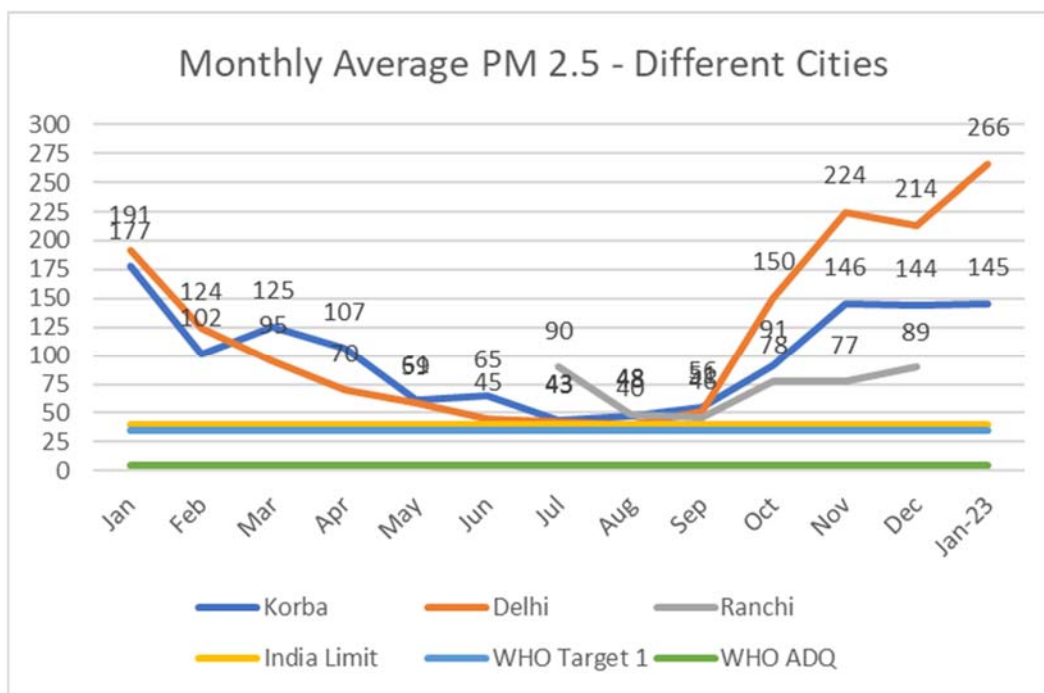
The above table shows the Monthly Average Heat Index for different cities.

Particulate Matter – Particulate matter or PM is the amount of dust particles in the air. These particles can be of different types i.e. organic, metallic etc. There are different sizes for these particles. Particles of size 10 micron are called PM 10. Those between size of 2.5 and 10 micron are called PM 2.5. Those between 1 and 2.5 micron are labelled as PM1. The smaller the size of the particles, the easier for it to enter the air stream of the body and cause more impact. NAAQS and WHO (World Health Organisation) have both set limits for amount of such particles in the air for PM 2.5 and PM 10. Below are the limits set. It is clear that the Indian standard is higher than the WHO ADQ standard. There are no standards yet for PM 1 which is considerably more harmful.

	PM 2.5 (ug/m3)	PM 10 (ug/m3)
NAAQS (Annual target)	40	60
WHO Interim target 1	35	70
WHO ADQ Target	5	15

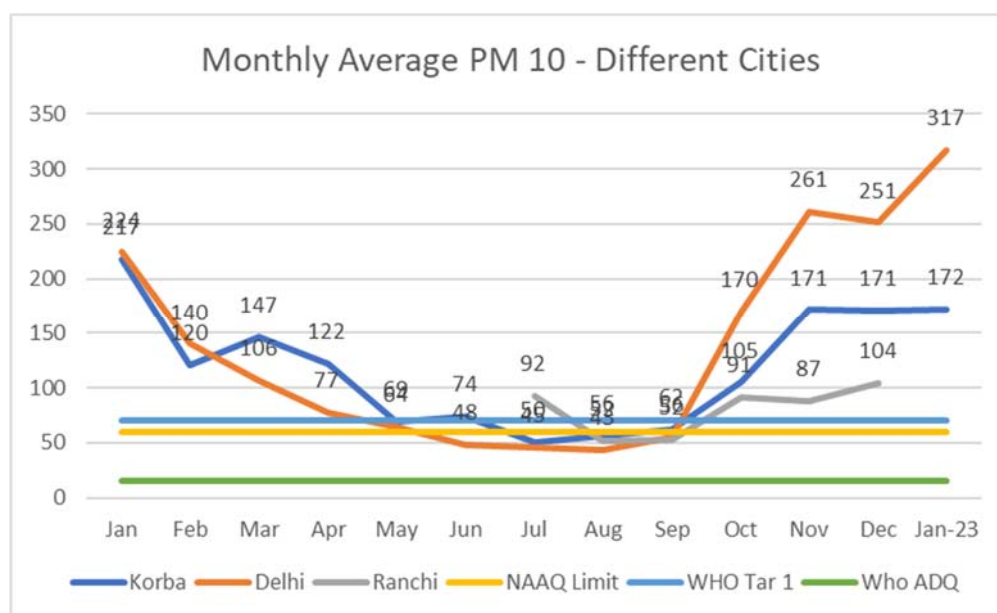
Below is the table and graph showing Monthly Average PM 2.5 values in different cities. In none of the months did any of the cities meet the higher Indian standard. In both Delhi and Korba, the values were more than 4 times the values in some of the months. Only during the monsoon period were the values closer to the standard but were still above. In Delhi the PM 2.5 particles have increased in comparison to December 2022. Even when compared to Jan 22, the values are higher. This is a matter of concern as smaller particles can cause more harm. Korba has improved in comparison to Jan 22 while values are almost same as December 2022.

Monthly Average PM 2.5 - Different Cities													
	Jan-22	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-23
Korba	177	102	125	107	61	65	43	48	56	91	146	144	145
Delhi	191	124	95	70	59	45	43	40	51	150	224	214	266
Ranchi							90	48	46	78	77	89	



The table and graph below show the Monthly Average PM 10 values in different cities. Except for a few months (Highlighted in Green) which were during the monsoon months, none of the cities met the Indian Standards. In comparison with the WHO ADQ standard, none even came close. While Korba values for PM 10 have improved as compared to Jan 22, Delhi values have deteriorated.

Monthly Average PM 10 - Different Cities													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-23
Korba	217	120	147	122	69	74	50	56	62	105	171	171	172
Delhi	224	140	106	77	64	48	45	43	56	170	261	251	317
Ranchi							92	52	52	91	87	104	



Data on AQI categories – Under the NAAQS, AQI categories have been listed which lists the different levels of Air pollution. AQI Classification as per NAAQS -

0-50	51-100	101-200	201-300	301-400	>401
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The Table below shows the AQI Categories for All device's location wise since January 2022. The numbers are daily figures for individual devices which have been added up based on cities. It means that AQI in Korba was between 0-50 on 164 daily intervals as recorded by all devices installed in Korba. The data shows that in all locations more than 64% of the days, AQI has been above 100. Delhi and Korba recorded more than 36% of the intervals with AQI above 200.

Location wise Totals (Since January 2022)									
	0-50	50-100	100-200	200-300	300-400	>400	Grand Total	Percent >100	>200
Korba	164	532	1059	727	495	159	3136	77.81%	44.04%
Delhi	380	759	904	519	399	244	3205	64.46%	36.26%
Ranchi	4	30	63	11	2	0	110	69.09%	11.82%

The Table below show City wise and month wise AQI categories wise information. The numbers are daily figures for individual devices which have been added up based on locations for each month. It means that AQI in Korba was between 50-100 on 12 daily intervals in January 2022 as recorded by all devices installed in Korba. The data shows the severe AQI months for both Korba and Delhi. Atmospheric conditions play a vital role in Air Pollution hence, AQI is Satisfactory in the summer and monsoon month when dispersion of pollutants is high. Weather conditions along with emission sources should be carefully considered and emissions controlled to ensure AQI remains below 100 throughout the year. In Delhi 100% of recorded AQI intervals were above 100 while the figure is 98% for Korba for the month of January 2023. In fact, in Delhi, AQI was above 200 for 98% of the recorded intervals showing the extent of bad air quality. The corresponding figure in January 22 for Delhi was 92%

		0-50	50-100	100-200	200-300	300-400	>400	Grand Total	Percent >100	Percent >200
Korba	Jan	0	12	36	48	31	6	133	91%	64%
	Feb	0	22	118	102	19	4	265	92%	47%
	Mar	0	28	99	56	29	16	228	88%	44%
	Apr	2	13	72	55	27	6	175	91%	50%
	May	4	70	101	9	0	0	184	60%	5%
	June	3	68	113	21	0	0	205	65%	10%
	July	50	74	46	5	0	0	175	29%	3%
	Aug	58	61	52	13	1	0	185	36%	8%
	Sep	19	68	35	2	0	0	124	30%	2%
	Oct	25	63	127	72	44	13	344	74%	38%
	Nov	3	23	64	115	141	40	386	93%	77%
	Dec	0	21	99	112	90	47	369	94%	67%
	Jan-23	0	9	97	117	113	27	363	98%	71%

Delhi	Jan	0	2	20	88	101	81	292	99%	92%
	Feb	15	32	74	96	85	14	316	85%	62%
	Mar	2	49	172	145	27	0	395	87%	44%
	Apr	10	85	219	59	0	0	373	75%	16%
	May	44	119	187	12	0	0	362	55%	3%
	June	152	134	63	9	3	1	362	21%	4%
	July	76	192	71	5	0	0	344	22%	1%
	Aug	47	83	29	0	0	0	159	18%	0%
	Sep	24	50	38	7	0	0	119	38%	6%
	Oct	10	13	16	31	24	21	115	80%	66%
	Nov	0	0	5	26	57	32	120	100%	96%
	Dec	0	0	7	20	58	39	124	100%	94%
	Jan-23	0	0	3	21	44	56	124	100%	98%

The Table below show Device wise AQI categories wise information. The numbers are daily figures for individual devices which have been added up till date. It means that AQI measured by device number ending with 66644 was between 50-100 on 30 daily intervals. Except 1 device in Korba, all other devices have recorded AQI above 100 above 50% of the daily monitored intervals. In one case this number is above 95% which is alarming.

Device Wise Totals (Selected Devices) – Since January 2022									
	0-50	50-100	100-200	200-300	300-400	>400	Grand Total	Percent >100	>200
861480034766644	12	30	64	37	57	33	233	81.97%	54.51%
861480034786105	17	48	130	95	71	11	372	82.53%	47.58%
861480034775850	35	102	121	80	30	1	369	62.87%	30.08%
861480034777765	4	11	41	9	2	0	67	77.61%	16.42%
861480034765562	38	84	120	53	22	0	317	61.51%	23.66%
861480034757130	23	64	110	30	6	2	235	62.98%	16.17%
862649042673930	0	42	97	68	25	8	240	82.50%	42.08%
861480034765406	0	12	116	106	38	16	288	95.83%	55.56%
861480034774176	6	41	70	57	49	3	226	79.20%	48.23%
862649042685215	23	78	79	12	3	2	197	48.73%	8.63%
861480034766461	21	79	87	79	64	65	395	74.68%	52.66%
861480034784522	42	79	95	46	47	32	341	64.52%	36.66%

862649043466 961	46	76	99	57	63	43	384	68.23%	42.45 %
861480034785 552	40	82	89	59	70	28	368	66.85%	42.66 %

Section 2 –Information and Analysis for January 2023

Location wise Information				
Location	Avg PM 2.5	Avg PM 10	Avg AQI	Max AQI
Korba	145	172	259	1998
Delhi	266	317	396	1815
Ranchi	-	-	-	-

Table above shows the city wise Average PM 2.5, PM 10, AQI and Max AQI for January 2023. During this period Average AQI is highest in Delhi although the Max AQI is recorded highest in Korba and has been recorded just below 2000. Although such high numbers have been recorded only for a few intervals but getting such high number for AQI is a matter of grave concern. In Delhi also, the Max AQI recorded has crossed 1400 which is a matter of concern and immediate action.

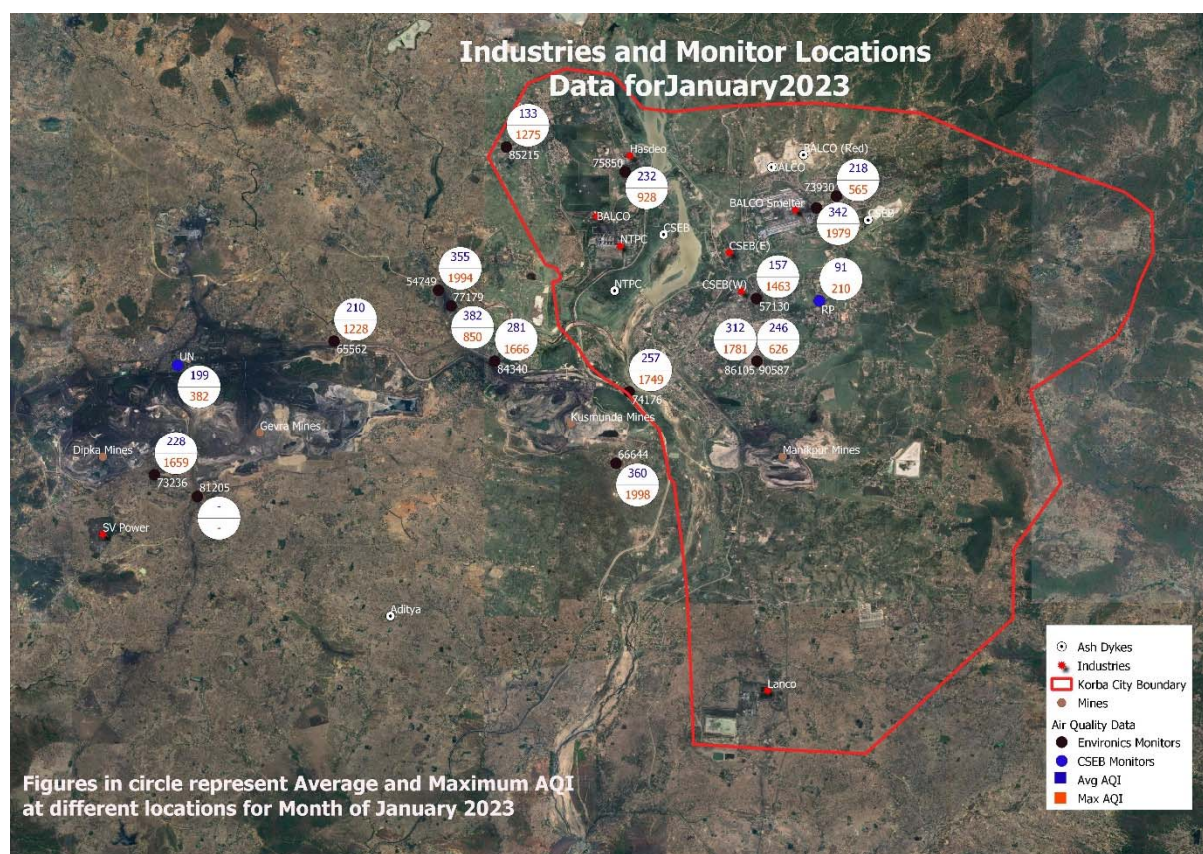
Data for individual devices placed at Korba can be seen in below table. Out of 14 devices which worked in Korba in this period 10 devices recorded maximum AQI greater than 1000. Average Monthly AQI is above 100 at all locations. Device placed at Surakachar chowk near the underground Mines recorded the highest Average AQI at 382 while device at NTPC Housing Colony was the cleanest at 133 but still above the Satisfactory range. The device at Gud Deva (Coal Siding) which is also close to the Surakachar underground mines has also repeatedly recorded high AQI values. 5 devices have recorded Average AQI above 300 and another 7 above 200

Location wise Avg and Max AQI for devices placed at Korba			
Device Number	Location	Avg	Max
861480034766644	Village Pali	360	1998
861480034786105	RSS nagar	312	1781
861480034775850	Child Home Darri	232	928
861480034765562	Gevra Mines Rehabilitated Area	210	1228
861480034757130	Korba City, Patharipara	157	1463
861480034765406	RSS Nagar	218	565
861480034765406	Vijaynagar. Gevra Rehab Colony	342	1979
861480034774176	Old Age Home, Near Sarvmangla Mandir	257	1749
862649042685215	NTPC Jamnipalli Housing Colony	133	1275
861480034781205	sarai singar chowk	-	-
861480034777179	Surakachar chowk (underground Mines)	382	850
861480034784340	Kanha Auto repairs, Station road	281	1666
861480034773236	Aryan Public School, Hardi Bazaar	228	1659
862649042690587	Near BALCO Power Plant	246	626
861480034754749	Gud Deva (Coal Siding)	355	1994

The map image below shows the locations of the devices installed in Korba along with the locations of major coal mines, Thermal power plants and ash dykes. The Korba municipal boundary is marked

in Red colour. The numbers in the map show the Average and Max AQI for each location along with the device number. Two monitors have been installed by CSEB at Ram Pur and Urja Nagar. Average Monthly AQI for January 2023 recorded by these devices is as below. Devices placed by Environics have been consistently recording higher AQI values. It may be because of placement of devices around Pollution sources which show such stark differences

	Ram Pur	Urja Nagar	ET Devices
January 2023	91	199	259



Map - Install and industrial locations at Korba. Numbers reflect Average and Max AQI of the location for January 2023. Map also shows the location of major coal mines, Thermal Power Plants and Ash Dykes. Korba Municipal Boundary is marked in Red colour

Daily average AQI for Different Cities for January 2023																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Korba	204	331	355	333	319	220	171	148	166	167	210	268	317	276	191	203
Delhi	354	476	428	387	444	482	441	527	862	491	392	410	427	324	228	292
Ranchi																

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Korba	250	305	340	363	367	318	302	269	268	246	275	249	224	273	231
Delhi	292	390	419	235	431	531	446	298	321	313	254	325	439	276	315
Ranchi															

The Tables above show Daily Average AQI between different cities for January 2023. Cells where AQI >100 have been highlighted. Other than that, the Air Quality in all three cities has been above 100 for the entire month. AQI in Delhi was the lowest at 235 and even went up to 862 on one day. AQI was above 400 for 15 days in the month. Even in Korba, AQI has been above 200 for the entire month except for 5 days. Both Korba and Delhi are fighting for the top spot in bad air quality with Delhi edging out Korba. This information in terms of AQI categories can be seen in the table below

City	0-50	51-100	101-200	201-300	301-400	>401	Not Work	Total
Korba	0	0	5	15	11	0	0	31
Delhi	0	0	0	7	9	15	0	31
Ranchi	0	0	0	0	0	0	31	31

Table - City wise categories for January 2023

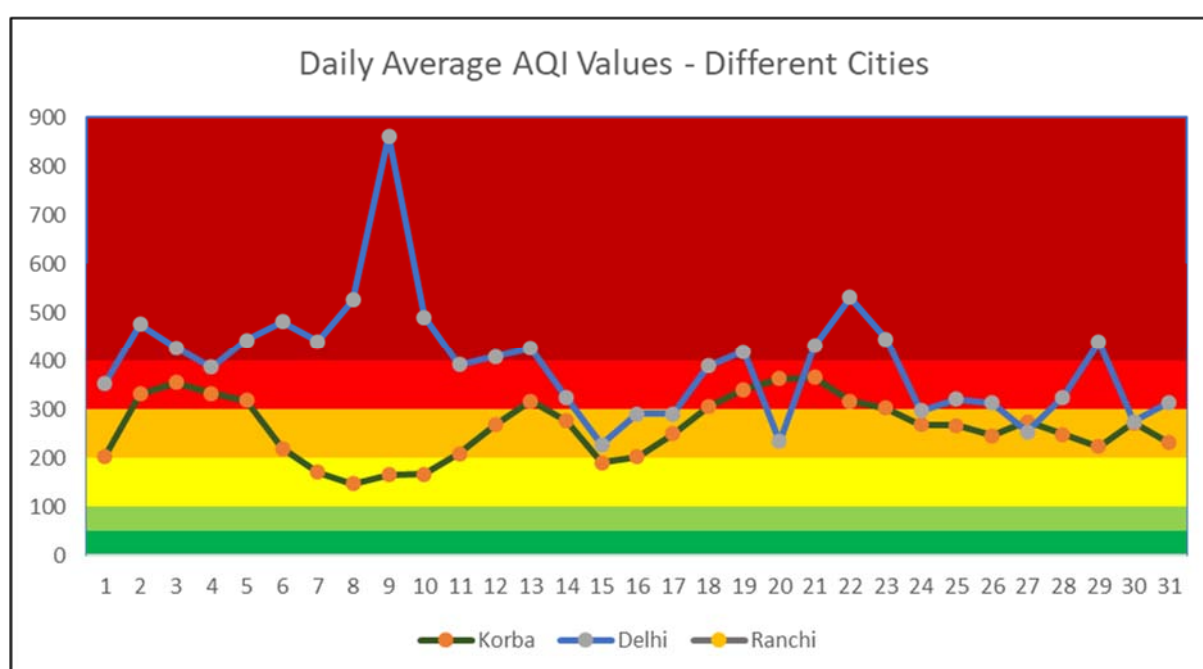


Table below shows the Daily Average AQI for individual devices placed at Korba. Figures above 250 have been marked in Red. The data reads like a sorry state of affairs.

Average AQI, Device Wise at Korba for January 2023															
Date	66644	86105	75850	65562	57130	73930	65406	74176	85215	81205	77179	84340	73236	90587	54749
1	296	293	134	173		221		216	97	-		221	144	224	247
2	432	393	317	331		281		357	216	-		327	315	336	393
3	464	414	338	359		320		378	196	-		368	341	376	425
4	406	373	316	322		361		365	179	-		346	322	351	355
5	380	410	301	309		311		325	173	-		342	309	341	340
6	321	274	208	216		174		198	123	-		270	190	201	242
7	257	255	144	139	143	152		180	105	-		180	135	141	282
8	229	183	106	80	148	128		142	94	-		206	95	128	278
9	232	243	122	115	117	130		170	81	-		260	147	142	328

10	270	239	185	128	115	160		148	92	-		191	141	154	228
11	428	264	180	175	153	169		194	95	-		265	185	208	324
12	430	358	262	251	219	180		292	102	-		344	247	225	496
13	507	399	323	299	260	247		307	156	-		348	289	300	527
14	573	348	226	250	172	233		235	97	-		345	269	295	336
15	284	245	140	153	123	160	238	194	98	-	356	197	122	165	234
16	313	266	150	147	117	169	188	205	116	-	353	230	134	212	297
17	345	331	206	159		245	246	280	179	-	350	240	152	270	258
18	397	359	279	189		332	311	320	238	-	366	306	221	333	340
19	421	386	305			311	336	294		-	386	360	265	335	365
20	446	402	368		258	319	462	375		-	397	334	321	346	460
21		399	371		173	286	539	318		-	397	374	423	329	526
22		316	301	233	183	236	431	320		-	390	359	336	292	526
23		324	268		174	217	463	303		-	392	336	294	240	429
24	363	256	187		146	128	401	267		-	389	311	273	192	435
25		253	240		146	163	393	269		-	394	335	277	168	387
26		262	194		146	209	309	240		-	385	213	218	202	387
27		312	218		150	238	304	204		-	380	410	226	277	311
28		286	192		178	196	268	212		-	375	345	183	249	288
29		248	189		150	147	289	193		-	391	234	178	165	316
30		307	224			221	300	246		-	393	275	153	251	398
31		287	181		129	187	283	201		-	381	244	175	225	260

Table – Daily Average AQI at Korba for January 2023 (blank implies device did not work)

Table - AQI Category wise information for individual devices (January 2023)

AQI categories Wise Information for Different Devices - January 2023										
Device Number	Location	0-50	50-100	100-200	200-300	300-400	>400	Grand Total	Percent >100	Percent >200
861480034766644	Korba				6	6	9	21	100%	100%
861480034786105	Korba			1	14	13	3	31	100%	97%
861480034775850	Korba			13	9	9		31	100%	58%
861480034777765	Korba	-							-	-
861480034765562	Korba		1	9	5	4		19	95%	47%
861480034757130	Korba			18	3			21	100%	14%
862649042673930	Korba			14	11	6		31	100%	55%
861480034765406	Korba			1	6	5	5	17	100%	94%
861480034774176	Korba			8	13	10		31	100%	74%
862649042685215	Korba		7	9	2			18	61%	11%
861480034781205	Korba	-							-	-
861480034777179	Korba					17		17	100%	100%
861480034784340	Korba			3	11	16	1	31	100%	90%
861480034773236	Korba		1	13	10	6	1	31	97%	55%
862649042690587	Korba			8	15	8		31	100%	74%

861480034754749	Korba				10	13	8	31	100%	100%
861480034766461	Delhi				2	10	19	31	100%	100%
861480034784522	Delhi				5	9	17	31	100%	100%
862649043466961	Delhi			1	7	14	9	31	100%	97%
861480034785552	Delhi			2	7	11	11	31	100%	94%
861480034766453	Ranchi								-	-

Time Interval wise Average AQI City wise and Device wise for January 2023 can be seen in table below

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to midnight
Delhi	448	389	329	480
66461	459	411	354	522
66961	369	334	316	469
84522	533	432	341	539
85552	432	368	307	392
Korba	245	289	196	333
54749	293	378	278	472
57130	100	198	109	213
65406	294	383	212	478
65562	200	221	158	275
66644	296	424	294	425
73236	228	250	156	279
73930	223	213	158	276
74176	262	287	169	303
75850	225	249	152	301
77179	368	384	361	412
82476	231	244	297	265
84340	232	312	191	379
85215	115	154	109	151
86105	313	348	219	374
90587	243	268	181	287

Time Interval Wise Maximum AQI at different Cities and devices for January 2023

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to midnight
Delhi	1643	1391	1159	1815
66461	1430	1134	819	1534
66961	1364	1279	1048	1586
84522	1643	1391	1159	1815
85552	1134	741	758	1174
Korba	1921	1954	1990	1998
54749	1921	1946	1990	1994
57130	320	1463	1273	1048
65406	881	1733	876	1979

65562	1015	568	993	1228
66644	983	1954	1878	1998
73236	829	1291	1475	1659
73930	465	427	420	565
74176	504	924	1749	700
75850	432	789	768	928
77179	483	610	546	850
82476	302	308	324	336
84340	552	1666	603	1165
85215	372	1275	489	591
86105	1033	844	840	1781
90587	453	626	511	506

Annexure 1 – Device Locations

Device Name / Location	Current City	City
861480034766644	Village Pali	Korba
861480034786105	RSS nagar	Korba
861480034775850	Child Home Darri	Korba
861480034777765	Sirki Village	Korba
861480034765562	Gevra Mines Rehabilitated Area	Korba
861480034757130	Korba City, Patharipara	Korba
862649042673930	Balco Housing Board	Korba
861480034765406	Dipka Mines Main Road	Korba
861480034774176	Old Age Home, Near Sarvmangla Mandir	Korba
862649042685215	NTPC Jamnipalli Housing Colony	Korba
861480034781205	sarai singar chowk	Korba
861480034777179	Surakachar chowk (underground Mines)	Korba
861480034784340	Station road	Korba
861480034773236	Hardi Bazaar	Korba
862649042690587	Near BALCO Main Plant	Korba
861480034754749	Gud Deva	Korba
861480034766461	Delhi	Delhi
861480034784522	Delhi	Delhi
862649043466961	Delhi	Delhi
861480034785552	Delhi	Delhi
861480034766453	Ranchi	Ranchi

Some Graphs and Data for Devices Placed at Korba

- 861480034766644 - Greenvoice Office dadar. Relocated to Village Pali in October

Table - Monthly Average and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Jan	426	19	1994	22
Feb	258	23	1326	34
May	128	40	1150	54
Jun	147	39	1033	54
Jul	85	36	560	50
Aug	102	34	558	53
Sep	163	35	394	53
Oct	312	30	6113	50
Nov	384	23	2001	49
Dec	349	22	1910	47
Jan 2023	360	20	1998	28

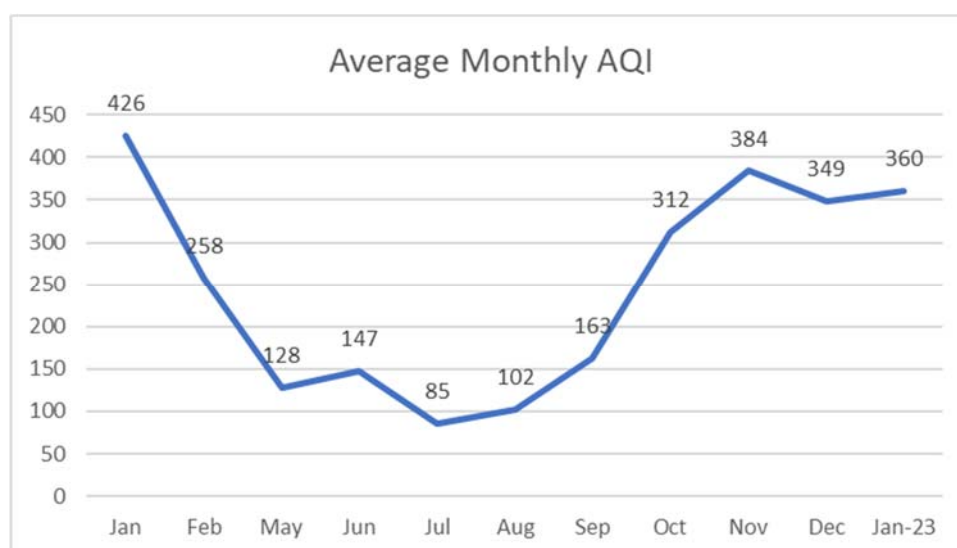


Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Jan				2	1	1	4
Feb			1	15	5		21
May		7	17				24
Jun		4	24	2			30
Jul	9	12	9				30
Aug	3	7	6	1			17

Sep			2				2
Oct			3	5	13	2	23
Nov					19	11	30
Dec			2	6	13	10	31
Jan-23				6	6	9	21

Table - Max AQI Time Intervals Wise (15 Minute Interval)

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	391		1994	1205
Feb	978	1221	514	1326
May	1003	507	1150	836
Jun	381	677	514	1033
Jul	409	413	560	423
Aug	412	451	369	558
Sep	48	277	327	394
Oct	889	6113	6113	1675
Nov	1538	2001	1988	1726
Dec	1174	1895	1910	1839
Jan-23	983	1954	1878	1998

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	237		340	474
Feb	234	318	121	364
May	132	145	90	148
Jun	141	175	105	167
Jul	62	88	85	103
Aug	74	117	87	131
Sep	26	132	194	187
Oct	241	366	295	343
Nov	338	434	342	424
Dec	308	401	287	398
Jan-23	296	424	294	425

Note - The device did not work between 21 Feb to 6 May 2022

- 861480034786105 - RSS Nagar

Table - Monthly Average and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Jan	298	18	1898	29
Feb	205	22	939	36
Mar	273	29	1225	44
Apr	238	36	1190	52
May	125	39	1205	58
Jun	134	39	1278	58
Jul	81	36	1010	62
Aug	102	34	963	58
Sep	119	34	730	60
Oct	179	29	1125	49
Nov	327	23	1115	38
Dec	317	21	1315	36
Jan-23	312	22	1781	40

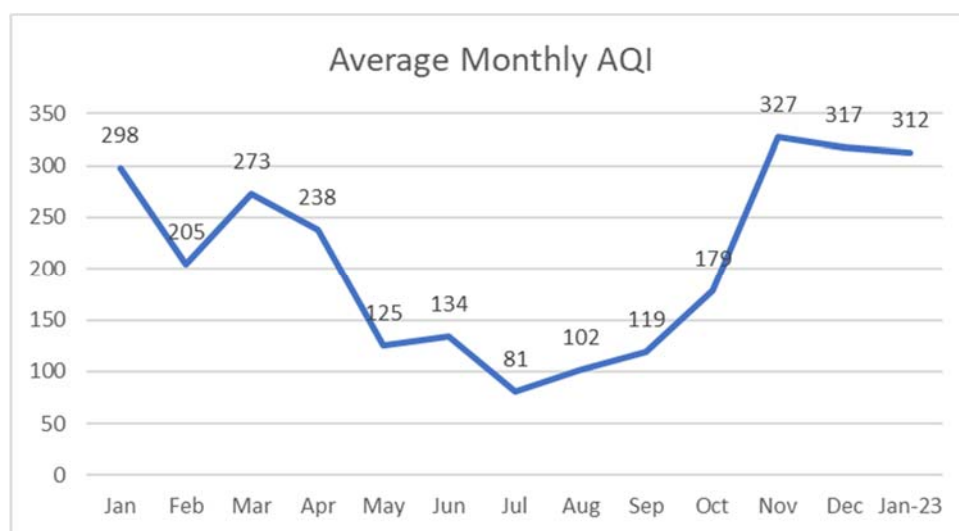


Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Jan				11	9		20
Feb			14	12	2		28
Mar			12	7	8	4	31
Apr			6	18	5	1	30
May		6	25				31
Jun		3	26	1			30
Jul	9	14	7				30
Aug	5	11	11	2			29
Sep	2	7	19	2			30

Oct	1	7	8	15			31
Nov				7	22	1	30
Dec			1	6	12	2	21
Jan-23			1	14	13	3	31

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	554	758	1898	1593
Feb	562	918	582	939
Mar	1060	1068	1225	1048
Apr	845	1103	1190	1118
May	628	1040	1030	1205
Jun	625	1118	1278	970
Jul	709	635	1010	505
Aug	359	963	394	629
Sep	330	578	377	730
Oct	494	705	363	1125
Nov	765	853	1115	1115
Dec	1203	1130	1180	1315
Jan-23	1033	844	840	1781

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	258	344	209	383
Feb	170	265	109	278
Mar	287	328	141	337
Apr	232	288	134	298
May	105	156	97	142
Jun	114	173	100	151
Jul	58	86	75	102
Aug	82	103	74	148
Sep	94	140	84	156
Oct	158	188	123	247
Nov	311	355	238	404
Dec	306	362	209	389
Jan-23	313	348	219	374

- 861480034775850 - Child Home Darri

Table - Monthly Average and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Jan	293	19	694	28
Feb	175	23	1574	41
Mar	194	30	723	49
Apr	159	35	586	55
May	76	39	545	58
Jun	88	38	1225	59
Jul	65	34	466	54
Aug	77	33	726	57
Sep	80	33	547	54
Oct	134	30	1511	53
Nov	252	24	1275	43
Dec	219	22	985	41
Jan-23	232	22	928	43

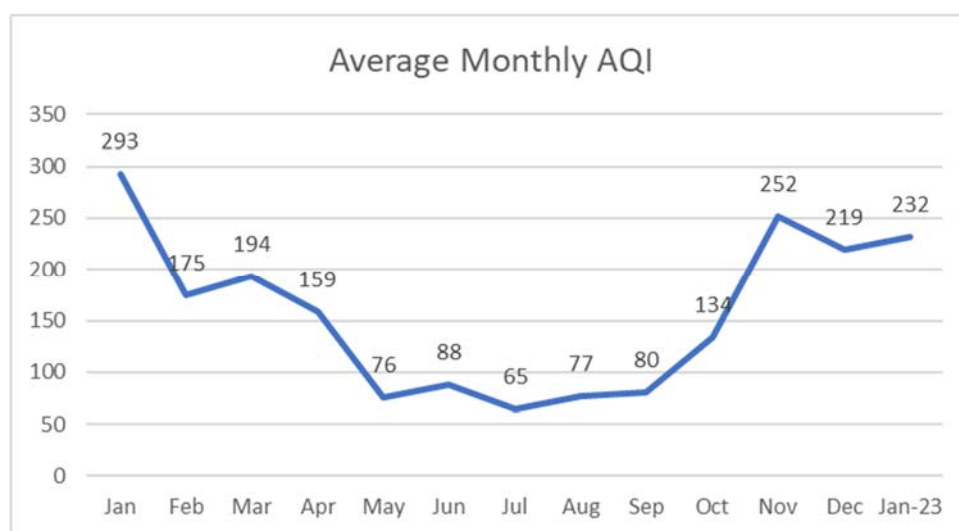


Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Jan		1		8	4	1	14
Feb		1	18	8	1		28
Mar		5	12	9	5		31
Apr		2	22	4	2		30
May	3	21	3				27
Jun	2	17	11				30
Jul	12	13	3				28
Aug	12	11	8				31

Sep	5	18	4				27
Oct	1	9	18	3			31
Nov			4	22	4		30
Dec		4	5	17	5		31
Jan-23			13	9	9		31

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	411	562	501	694
Feb	426	876	368	1574
Mar	582	723	418	628
Apr	469	586	333	583
May	367	417	436	545
Jun	433	1225	297	963
Jul	378	369	305	466
Aug	381	445	306	726
Sep	311	514	381	547
Oct	423	420	849	1511
Nov	393	675	751	1275
Dec	607	602	728	985
Jan-23	432	789	768	928

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	272	327	224	346
Feb	148	201	87	263
Mar	195	222	102	259
Apr	172	195	73	198
May	68	91	50	95
Jun	73	113	59	107
Jul	38	71	57	87
Aug	57	75	62	116
Sep	57	87	71	106
Oct	108	119	98	207
Nov	257	259	163	332
Dec	229	227	128	293
Jan-23	225	249	152	301

- 861480034765562 - Gevra Mines Rehabilitated Area

Table - Monthly Average and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
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Jan	350	20	1168	27
Feb	185	23	1640	39
Mar	212	29	1515	48
Apr	238	35	1040	52
May	98	38	1300	56
Jun	109	38	1156	52
Jul	66	36	939	56
Aug	69	35	633	49
Sep	74	36	1110	55
Oct	99	31	883	54
Nov	185	25	1220	38
Dec	230	23	1468	31
Jan-23	210	21	1228	28

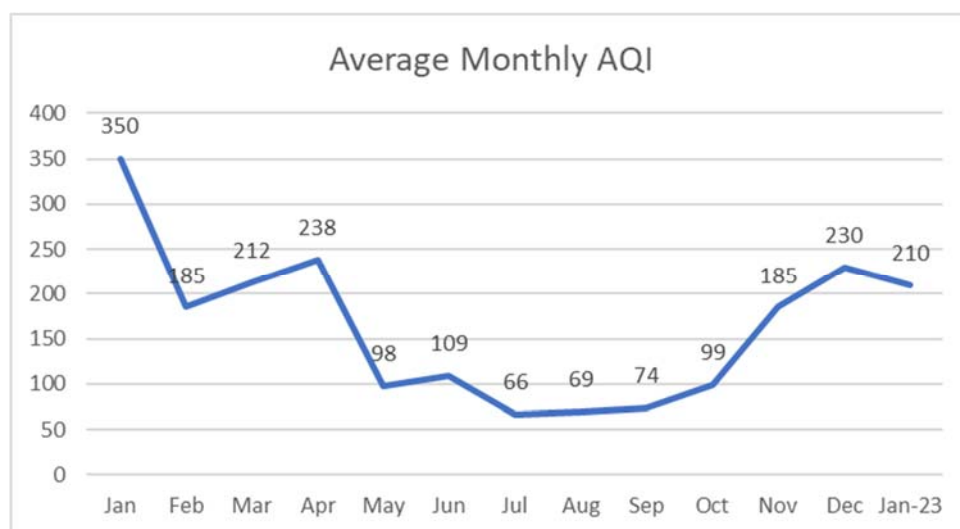


Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Jan					1		1
Feb			17	9	1		27
Mar		1	14	10	6		31
Apr			7	13	5		25
May	1	14	13				28
Jun		15	14	1			30
Jul	11	17	3				31
Aug	15	11	5				31
Sep	6	15	3				24
Oct	5	10	16				31
Nov			11	7			18
Dec			8	8	5		21
Jan-23		1	9	5	4		19

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan			267	1168
Feb	750	1448	1248	1640
Mar	550	1515	1415	1064
Apr	1040	546	463	1020
May	330	970	798	1300
Jun	1114	598	358	1156
Jul	522	939	619	673
Aug	277	633	409	485
Sep	227	450	1110	728
Oct	883	706	585	443
Nov	362	589	1220	414
Dec	428	1468	1164	993
Jan-23	1015	568	993	1228

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan			81	519
Feb	179	194	99	271
Mar	214	231	126	278
Apr	265	284	140	249
May	93	111	69	120
Jun	110	125	70	131
Jul	46	85	62	72
Aug	51	79	65	84
Sep	50	87	80	82
Oct	75	100	83	147
Nov	150	187	155	257
Dec	210	242	159	313
Jan-23	200	221	158	275

- 861480034757130 - Korba City

Table - Monthly Average and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Jan	393	19	1984	24
Feb	252	23	1243	46
Mar	275	25	413	31
Apr	165	37	1305	50
May	119	40	1210	59
Jun	132	39	445	53
Jul	96	36	1965	53
Aug	58	34	1455	44
Sep	71	35	1278	45
Oct	85	32	3158	44
Nov	158	22	885	41
Dec	150	22	1260	37
Jan-23	157	23	1463	39

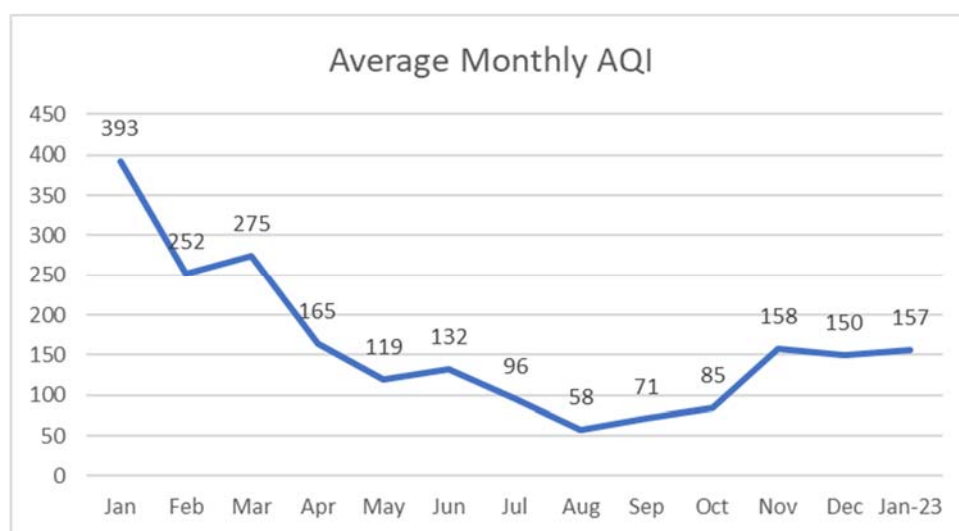


Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Jan			2	1	3	1	7
Feb		1	3	21	3		28
Mar			1			1	2
Apr			5				5
May		7	17				24
Jun		3	12	1			16
Jul	3	6	3	1			13
Aug	12	11	2				25

Sep	5	22	3				30
Oct	3	10	7				20
Nov		1	14	1			16
Dec		3	23	2			28
Jan-23			18	3			21

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	367	387	1984	1369
Feb	368	923	1243	1011
Mar	0	137		413
Apr	598	955	328	1305
May	933	1210	1175	389
Jun	207	445	429	435
Jul	808	1233	1965	385
Aug	948	468	1348	1455
Sep	1100	435	673	1278
Oct	609	3158	1303	1280
Nov	306	885	810	585
Dec	1260	1185	918	885
Jan	320	1463	1273	1048

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	282	364	334	445
Feb	209	328	127	340
Mar		137		413
Apr	117	244	87	212
May	97	134	104	140
Jun	93	159	112	162
Jul	52	95	128	114
Aug	40	49	56	82
Sep	43	76	64	100
Oct	51	103	72	114
Nov	107	209	100	215
Dec	114	194	102	189
Jan	100	198	109	213

- 861480034765406 - Kusmunda Mines Area

Table - Monthly Average and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
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Jan	221	18	1555	25
Feb	258	25	1683	52
Mar	260	32	1774	60
Apr	319	37	1921	49
May	179	40	1996	61
Jun	200	40	1969	55
Jul	157	37	1984	50
Aug	168	36	1955	53
Sep	184	41	452	44
Oct	176	30	8675	42
Nov	279	24	1948	31
Jan-23	342	23	1979	33

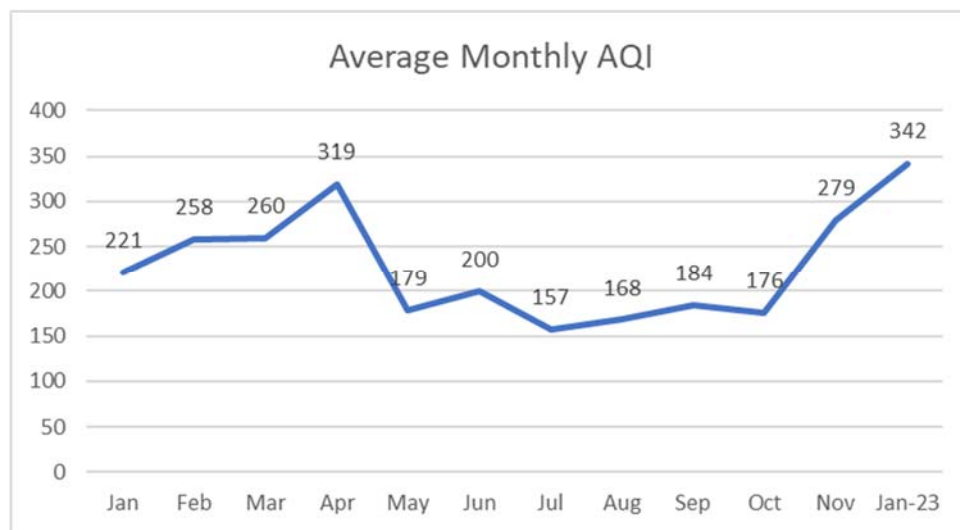


Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Jan		1	8	7	4		20
Feb			5	17	4	1	27
Mar			10	9	2	5	26
Apr				14	12	4	30
May			20	9			29
Jun			14	16			30
Jul		6	21	4			31
Aug		4	16	10	1		31
Sep			2				2
Oct		1	17	2	1		21
Nov			2	12	9	1	24
Jan			1	6	5	5	17

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	434	497	580	1555
Feb	590	1428	1683	1646
Mar	660	1371	1234	1774
Apr	936	1921	1816	1725
May	508	1730	1996	1013
Jun	681	1969	1853	1169
Jul	492	1984	1786	1261
Aug	427	1955	1853	946
Sep	270	452	308	414
Oct	427	835	766	8675
Nov	457	720	1489	1948
Jan	881	1733	876	1979

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Jan	181	234	119	342
Feb	170	283	159	421
Mar	183	304	174	383
Apr	265	402	245	367
May	116	249	169	182
Jun	117	291	210	183
Jul	65	241	179	139
Aug	83	219	200	169
Sep	103	241	164	292
Oct	99	159	101	340
Nov	201	276	210	445
Jan	294	383	212	478

Note- Device did not work in December 2022

- 861480034774176 - Balco Township, Relocated to Old Age Home near Sarvmangla Mandir in October

Table - Monthly Avg and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Feb	116	21	686	51
Mar	199	28	1043	52
Apr	165	34	666	51
May	73	37	438	50
Jul	35	39	318	44
Sep	93	31	367	41
Oct	176	31	1419	56
Nov	322	24	1138	46
Dec	280	23	1149	41
Jan_23	257	22	1749	43

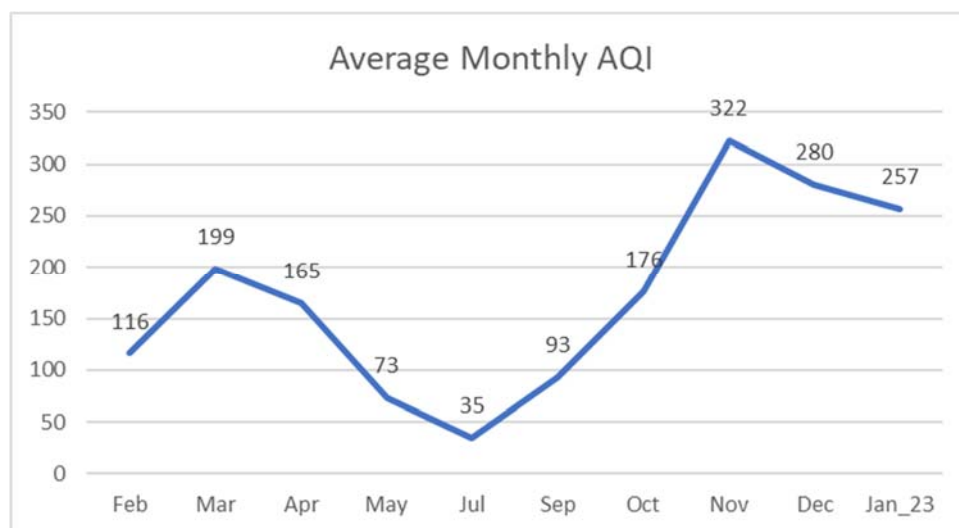


Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Feb		10	14	1			25
Mar		10	7	8	3	3	31
Apr		5	15	6	2		28
May	2	9	3				14
Jul	4	1					5
Sep		2	1				3
Oct		4	16	8			28
Nov				8	22		30
Dec			6	13	12		31
Jan_23			8	13	10		31

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Feb	383	556	514	686
Mar	1043	939	385	856
Apr	666	592	329	437
May	263	438	273	280
Jul	17	95	43	318
Sep	283	367	342	338
Oct	626	1061	1419	550
Nov	1138	988	431	728
Dec	805	828	474	1149
Jan	504	924	1749	700

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Feb	106	126	65	165
Mar	249	209	91	244
Apr	192	200	81	187
May	77	79	58	79
Jul	13	25	16	52
Sep	58	143	72	101
Oct	174	200	114	215
Nov	343	343	232	367
Dec	302	307	171	336
Jan	262	287	169	303

- 862649042685215 - NTPC Jamnipalli

Table - Monthly Avg and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Feb	152	22	1369	33
Mar	193	28	1343	43
Apr	179	36	764	51
Jun	84	37	537	56
Jul	72	34	338	51
Aug	37	34	365	50
Sep	66	34	383	52
Oct	61	29	496	46
Nov	99	21	568	32
Dec	119	21	981	29
Jan	133	18	1275	28

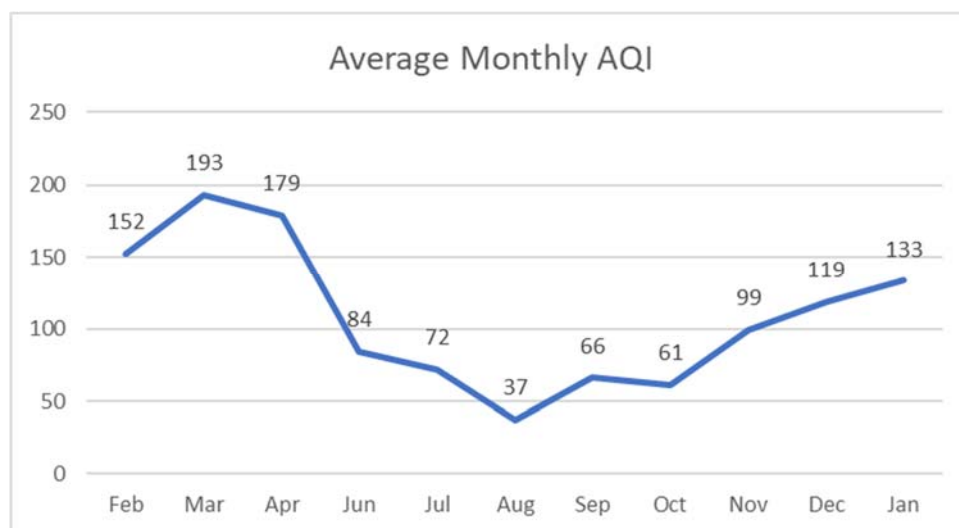


Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Feb		1	19	3			23
Mar		6	11	6	3	2	28
Apr			10	1			11
Jun	1	16	6				23
Jul	1	5					6
Aug	8	2					10
Sep	1	4	1				6
Oct	12	12	1				25
Nov		16	8				24
Dec		9	14				23
Jan		7	9	2			18

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Feb	351	619	313	1369
Mar	718	861	346	1343
Apr	385	443	431	764
Jun	458	365	336	537
Jul	150	287	338	325
Aug	167	365	163	314
Sep	200	383	157	341
Oct	325	429	335	496
Nov	326	360	442	568
Dec	353	418	380	981
Jan	372	1275	489	591

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Feb	139	176	83	207
Mar	186	231	111	243
Apr	187	238	86	207
Jun	78	108	61	90
Jul	46	70	77	100
Aug	29	41	35	42
Sep	65	56	47	96
Oct	50	61	54	76
Nov	86	101	83	121
Dec	99	141	91	141
Jan	115	154	109	151

- 861480034781205 sarai singar chowk – Installed in October 2022

Table – Monthly Average and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Oct	236	27	2491	44
Nov	267	23	821	39
Dec	160	21	465	29

Table – AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Oct		1	4	6	10	1	22
Nov			8	6	16		30
Dec			5	1			6

Table – Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Oct	517	571	623	2491
Nov	656	821	768	813
Dec	353	405	465	448

Table – Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Oct	220	225	174	303
Nov	263	273	224	311
Dec	146	173	125	199

Note – Device did not work in January 2023

- 861480034777179 Surakachar chowk (underground Mines) – Installed in October 2022

Table - Monthly Avg and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Oct	370	29	1371	45
Nov	428	22	1620	36
Dec	443	21	1168	30
Jan	382	22	850	32

Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Oct			1	3	17	6	27
Nov					9	21	30
Dec					5	19	24
Jan					17		17

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Oct	646	701	652	1371
Nov	804	1228	948	1620
Dec	585	826	916	1168
Jan	483	610	546	850

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Oct	332	355	342	439
Nov	383	425	459	459
Dec	436	438	395	487
Jan	368	384	361	412

- 861480034784340 Kanha Auto repairs, Station road – Installed in October 2022

Table - Monthly Avg and Max AQI and HI

	Avg AQI	Avg HI	Max AQI	Max HI
Oct	218	27	2295	46
Nov	331	21	1300	31
Dec	326	20	1948	29
Jan	281	19	1666	30

Table - AQI Categories Month Wise

	0-50	50-100	100-200	200-300	300-400	>400	Total
Oct			9	13		1	23
Nov			2	5	14	4	25
Dec			2	7	15	7	31
Jan			3	11	16	1	31

Table - Max AQI Time Intervals Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Oct	674	1083	1083	2295
Nov	808	1073	1029	1300
Dec	841	1948	1121	1714
Jan	552	1666	603	1165

Table - Avg AQI Time Interval Wise

	Midnight to 6 AM	6 AM to 12 Noon	12 Noon to 6 PM	6 PM to Midnight
Oct	148	209	163	347
Nov	285	325	257	451
Dec	286	332	197	478
Jan	232	312	191	379