AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 2.12.2022
(BASED ON US-EPA AQI STANDARDS AND THE DAYALBAGH AQI COLOUR CODE)

Permissible Limits (24 Hour Mean): PM_{10} = 150; $PM_{2.5}$ = 35, all units are in $\mu g/m^3$ Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

Today: 1-12-2022 to 2 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 30 -11-2022 to 1-12-2022 from 9:00 a.m. to 9:00 a.m.

DAYALBAGH (TIME WEIGHTED AVERAGE DATA)

LOCATION	AQI PM2.5 Today	AQI PM2.5 Yesterday	AQI PM10 Today	AQI PM10 Yesterday	RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m²	RF mm
4 / 97	149 (21%↓)	158	62 (31%↓)	79	70	0.4	WNW	28.8	11.6	120	0
3 / 34	137 (9%↓)	149	57 (16%↓)	63	70	0.4	WNW	28.8	11.6	120	0
Science Faculty	149 (20%↓)	158	58 (23%↓)	68	70	0.4	WNW	28.8	11.6	120	0

SANJAY PLACE AND AVAS VIKAS (ARITHMETIC MEAN DATA)

LOCATION	AQI PM2.5 Today	AQI PM2.5 Yesterday	AQI PM10 Today	AQI PM10 Yesterday	RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m²	RF mm
Sanjay Place	172 (9%↓)	177	125 (4%↓)	130	60	0.9	W	27.5	14.4	121	0
Avas Vikas	115 (8%↓)	124	57 (8%↓)	60	71	0.4	NE	27.2	12.5	65	0

Views of AQI Research Group: Concentrations of $PM_{2.5}$ have decreased at all sites of Dayalbagh probably due to more dispersion. The Air Quality Index w.r.t. $PM_{2.5}$ has improved to the *Unhealthy for Sensitive Groups* category while w.r.t. PM_{10} it remains in the *Moderate* category at all sites of Dayalbagh.
At Sanjay Place and Avas Vikas, Bodla also the concentrations have decreased, yet the Air Quality Index w.r.t $PM_{2.5}$ remains in the *Unhealthy for All* category at Sanjay Place and in *Unhealthy for Sensitive Groups* category at Avas Vikas, Bodla while w.r.t. PM_{10} it remains in the *Unhealthy for Sensitive Groups* category at Sanjay Place and in *Moderate* category at Avas Vikas, Bodla.

Values in parentheses indicate the percentage change in the pollutant concentrations with respect to yesterday. ↑indicates increase while ↓ indicates decrease in pollutant concentrations. Percentage change has not been shown w.r.t. AQI values as the breakpoints for the different categories are not evenly distributed.

Good 0 - 50	Moderate 51 - 100	Unhealthy for Sensitive Groups 101 - 150	Unhealthy for All 151 - 200	Very Unhealthy for All 201 - 300	Hazardous for All 301 - 400	Hazardous for All 401 - 500

NOTE: 1 A continuing study conducted as part of **Dayalbagh Sigma Six Qualities and Values Model** implementation.
2 DEI is using United States Environmental Protection Agency (USEPA) methodology and online calculators to calculate AQI. For fair comparison with UPPCB Sanjay Place Weather Station readings, their $PM_{2.5}$ concentration readings are fed in USEPA online calculator for AQI calculation.
3 Formula for AQI calculation for a Pollutant –

$$I = \frac{I_{high} - I_{low}}{C_{high} - C_{low}} * (C - C_{low}) + I_{low}$$

where: I = Air Quality Index; C = Pollutant Concentration ($PM_{2.5}$); C_{low} = Concentration Breakpoint ≤C; C_{high} = Concentration Breakpoint ≥C; I_{low} = Index Break point corresponding to C_{low}; I_{high} = Index Breakpoint corresponding to C_{high}; *Multiplication Sign

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