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MONITORING AMBIENT AIR QUALITY STUDY IN ARIYALUR, TAMILNADU, INDIA

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ABSTRACT

Particulate matter is a major air contaminant in the ambient air and wide information is assessable on its concentrations from various parts of the world. Air pollutants with the strongest evidence for public health concern, include particulate matter (PM), ozone (O_3), nitrogen dioxide (NO_2) and sulphur dioxide (SO_2). Air pollutants are reported to be harmful to human health if their concentrations exceed certain acceptable levels. Industries have contributed substantially to the air pollution problem as point source of emissions. Understanding the current status of ambient air quality in and around Peenya in Bangalore will help to identify the probable sources of pollutants to facilitate the effective control measures. The aim of the present work is to determine the ambient air quality of Peenya region in terms of PM_{10}, PM_{100}, $PM_{2.5}$, SO_2, NO_x and CO levels to identify the probable sources of pollutants to facilitate the effective control measures. As Ariyalur is a land of limestone, the cement industries flourishes to maximum resulting in air pollution. The present study was concerned with the determination of particulate matter concentration at different locations of Ariyalur. The experiments were carried out from January to December 2020. Thus, it was clear that the values are higher than the prescribed standards and it is impartment that the control measures must be taken to check the air pollution.

INTRODUCTION

Ariyalur is considered a life-size site in Tamil Nadu and is considered to be the site of large concrete making. There are various limestone mines and many concrete processed plants in and around Ariyar, without delay of British regulations. Interest in the exact properties of concrete has increased from level to grade. It was achieved by good concrete business automation. A concrete company is one of the concentrated groups of power. Huge air poisoning in the problem of particulate matter (PM10) in the concrete industry is now being discharged from almost every job completed in a concrete processing plant. Air pollution has become a significant opportunity for the sustainability of plant life in the mechanical regions of Gupta and Mishra (1994). Rapid industrialization and the spread of toxic substances into the climate are responsible for the transformation of the environment (Mudd and Kozlowski, 1975; Clayton and Clayton, 1982; Niragau and Davidson, 1986).

Air pollution is described as an additional burden on plants, as they regularly react to weather drift in the same way that they react to dry weather and other climatic pressures. Air pollution work harms both by using a direct dangerous effect and by polluting the physiology of the host, making it more prone to getting polluted. In the acute example of infection, signs of damage such as leaf rot or plant disappearance were reported. Some experts have now tested the effect of airborne infections in flowers with respect to the anatomy of aluminum foil and biochemical modifications, with help to examine the exceptionally fragile plant life Samal and Orange (2002). Air pollution is most likely described as any climatic condition that ensures that substances are found in determinations that they are prepared to cause undesirable effects on humans and their environmental factors. These materials include gas (SO2, NO2, CO, hydrocarbons), particulate matter (smoke, waste, exhaust, and vaporizers), radioactive materials, and Vista, among others. A large proportion of these materials are often airborne gifts with low fixation and are often considered harmless (Rao, 1996).

Globally, rapid growth in engine car action is accompanied by signs of extreme power protection and environmental change. About 50% of the oil in the field burns around the car. However, for the construction of both countries in the metropolitan areas, it is mainly the transfer of versatile and automobiles that combine the best inconveniences in the air. Ignition of petroleum sources in engine wells and for mechanical bicycles in pollution wells, social development for domestic development and smoking, arrival of electricity and high residue levels, smoking, non-road roads, clearing, long type houses Included. Due to shipping. The present study to estimate the PM_{10}, PM_{100},$PM_{2.5}$, SO_2, NOx and CO levels concentration in the sampling stations in the period of January to December 2020.

Table – 1: National ambient air quality standards

Pollutants	Time-weighted average	Concentration in Ambient Air		
		Industrial Areas	Residential, Rural & other Areas	Sensitive Areas
Sulphur Dioxide (SO_2)	Annual Average*	80 µg/m^3	60 µg/m^3	15 µg/m^3
	24 hours**	120 µg/m^3	80 µg/m^3	30 µg/m^3
Oxides of Nitrogen as (NO_2)	Annual Average*	80 µg/m^3	60 µg/m^3	15 µg/m^3
	24 hours**	120 µg/m^3	80 µg/m^3	30 µg/m^3
Suspended Particulate Matter (SPM)	Annual Average*	360 µg/m^3	140 µg/m^3	70 µg/m^3
	24 hours**	500 µg/m^3	200 µg/m^3	100 µg/m^3
Respirable Particulate Matter (RPM) (size less than 10 microns)	Annual Average*	120 µg/m^3	60 µg/m^3	50 µg/m^3
	24 hours**	150 µg/m^3	100 µg/m^3	75 µg/m^3
Lead (Pb)	Annual Average*	1.0 µg/m^3	0.75 µg/m^3	0.50 µg/m^3
	24 hours**	1.5 µg/m^3	1.00 µg/m^3	0.75 µg/m^3
Ammonia	Annual Average*	0.1 mg/ m^3	0.1 mg/ m^3	0.1 mg/m^3
	24 hours**	0.4 mg/ m^3	0.4 mg/m^3	0.4 mg/m^3
Carbon Monoxide (CO)	8 hours**	5.0 mg/m^3	2.0 mg/m^3	1.0 mg/ m^3
	1 hour	10.0 mg/m^3	4.0 mg/m^3	2.0 mg/m^3

MATERIALS AND METHODS

To better investigate the surrounding air, stations are highlighted within the mass thickness area. A tight breathable soil sampler (Enviro tech APM 460) with a circulating load of 1.2 to 1.45 m3 / min was applied to the SPM and RPM observations. An example with pores occurred in a way that incorporated gas was gathered and tested (Envirotech APM411). The tap provided on the sampler container is now used for SO2, NOX and CO analysis with a suitable flow regulator and a flow rate of 1.0 L / min. The Envirotech Organic Vapor Sampler (APM 850) and the Drager Multiwarm II BD Computerized Imported Faculty Sampler are used to observe CO. Toxins were found 24 hours a day, twice a month or during the season.

PM_{10}

Aligned Respirable dust Sampler is applied with Whatman GF/A microfibre channel paper for the assurance of PM10. PM10 is a proportion of particulate difficulty having length <10 microns. Respirable dust Sampler (RDS) is joined with a twister. Air enters a vertical chamber with whirling (Vortex) movement and molecule bigger than configuration cut-off are stored at the on the inward floor of the chamber, though particles under 10 microns are saved on the Whatman GF/A microfibre channel paper. PM10 was determined by taking the evaluation amongst ultimate and introductory load of the channel paper and setting apart extent of the air examined.

$PM_{2.5}$

Satisfactory particulate matter problems (PM2, five, particles less than 2-5 µm at aerodynamic distance throughout) have been associated with a variety of adverse welfare effects that are less perceived as simple changes in the stability of radiation from Earth (eg, Dockery et al., 1993; Burnett et al., 1995; Hinds, 1999). The quality of PM2.5 is likely to derive directly from critical sources of supply, such as motorized vehicles, mechanical work, biomass consumption, or indirectly through the exchange of vapor emissions to air from anthropogenic or functional objects.

Estimation of SO_2

Sulfur dioxide is safe in the scoring association of sodium tetrachlorio-pious and is allowed to react with HCLO and then with paracetamol hydrochloride. Computerized spectro photometer at 560nm frequency is used to absorb the object Crimson-Violet colors.

Estimation of NO_2

Nitrogen oxide, as nitrogen dioxide foam air, accumulates through the reaction of sodium hydroxide to form an integrated system of sodium nitrate. The nitrate particles brought in for analysis use phosphoric cinchona, sulfenylamide and N (1 naphyl) ethylene d hydrochloride (IS: 5182 component IV, 1975) using an automatic spectrophotometer at a frequency of 540nm.

Estimation of CO

The imported higher-level CO identifier (Drager's Mini Warn) is used for CO checking. About 6m above the floor to prevent the floor from holding dust off the floor. Replication for (PM10) was tested four times a month and the analyzes were performed between January and June 2020.

Calculations

Determination of respirable particulate matter (PM_{10})

$$\text{Concentration of } PM_{10} = \frac{W \times 106}{V \times T} \ \mu g/m^3$$

Where

V = Flow rate in cubic meter per minutes

T = Total period of sampling in minutes

W = Difference in final and initial weight of filter paper in grams.

Determination of Non respirable particulate matter (PM_{100})

$$\text{Concentration of } PM_{100} = \frac{W \times 106}{V \times T} \ \mu g/m^3$$

Where

V = Flow rate in cubic meter per minutes
T = Total period of sampling in minutes
W = Difference in final and initial weight of hopper in grams.

Determination of Particulate matter $PM_{2.5}$

$$\text{Concentration of } PM_{2.5} = \frac{W \times 106}{V \times T} \ \mu g/m^3$$

Where
V = Flow rate in cubic meter per minutes
T = Total period of sampling in minutes
W = Difference in final and initial weight of filter paper in grams

RESULTS AND DISCUSSION

The level of PM_{10}, PM_{100}, $PM_{2.5}$,SO_2, NO_2 and CO recorded at various sampling stations has been tabulated in table 1-12. During January 2020, the highest PM_{10} level (328 $\mu g/m^3$) has been recorded at Minnagar. Similarly the PM_{100} level (475$\mu g/m^3$) and $PM_{2.5}$ level (160 $\mu g/m^3$) were the highest in the same region. NO_2, SO_2 and CO reacts with the atmospheric hydrocarbons in the presence of sunlight, so that its concentration is lowest during the afternoon hours; it is also stated that Ozone concentration is the highest during this period which however, cannot be substantiated by the present study, as Ozone was not estimated. The highest values of NO_2 recorded in the study at the Minnagar (51 $\mu g/m^3$) and SO_2 (29.8$\mu g/m^3$)has been recorded in the Fairland. The means of CO Values recorded in the Melamathur was about 1340 $\mu g/m^3$ and it was during January 2020.

During February 2020, the highest PM_{10} level (417 $\mu g/m^3$) has been recorded at Housing board. Similarly the PM_{100} level (518$\mu g/m^3$) and $PM_{2.5}$ level (151 $\mu g/m^3$) were the highest in the same region. The highest values of NO_2 recorded in the study at the Minnagar (51.4 $\mu g/m^3$) and SO_2 24.7$\mu g/m^3$ has been recorded in the Housing board. The means of CO Values recorded in the Housing board was about 980 $\mu g/m^3$. During March 2020, the highest values recorded happens to be at Housing board for PM_{10}, PM_{100}, $PM_{2.5}$ and it was 417, 724, and 125$\mu g/m^3$ respectively. The highest values of NO_2 and SO_2 recorded in the Govindhapuram were 51.6 and 21.7 $\mu g/m^3$, and the CO Values has been recorded in the Minnagar and it was 840 $\mu g/m^3$.

During April 2020, the highest values recorded happens to be at Housing board for PM_{10}, PM_{100}, $PM_{2.5}$ and it was 840, 628, and 134$\mu g/m^3$ respectively. The highest values of NO_2 and SO_2 recorded in the

Minnagar were 51.3 and 20.1 μg/$m^3$and the CO Values has been recorded in the Housing board and it was 940 μg/m^3. During May 2020, the highest PM_{10} level (295 μg/m^3) has been recorded at Housing board. Similarly the PM_{100} level (462μg/m^3) and $PM_{2.5}$ level (134 μg/m^3) were the highest at the same region. The highest values of SO_2 and CO recorded in the study were at Housing board (21.4 μg/m^3 and 864 μg/$m^{3)}$. The means of NO_2 Values has been recorded in the Minnagar and it was 51.4 μg/m^3 during May 2020.

During June 2020, the highest values of PM_{10}, PM_{100}, $PM_{2.5}$ happens to be at Housing board was 214, 416, and 138μg/m^3 respectively. Similarly, the highest values of NO_2, SO_2 and CO recorded in the same region and they were 49.8 , 24.8, and 716 μg/m^3 respectively. Similarly, the highest values of PM_{10}, PM_{100}, $PM_{2.5}$,SO_2 and NO_2 has been recorded in the Housing board and they were 610, 544, 158, 21.4 and 44.8 μg/m^3 respectively. The CO Values has been recorded in the Minnagar and it was 868 μg/m^3 in July 2020.

During August 2020, the highest values of PM_{10}, PM_{100}, $PM_{2.5}$ happens to be at Housing board and they were 288, 538, and 132μg/m^3 respectively. Similarly, the highest values of NO_2 and SO_2 recorded in the same region was 54.4 ,and 22.8 μg/m^3.The CO Values has been recorded in the Allinagaram and it was 762 μg/m^3. During September 2020, the highest PM_{10} ,$PM_{2.5}$ and NO_2 level (768 ,204 and 50.8 μg/m^3) has been recorded at Housing board. The PM_{100} , SO_2 and CO (864, 19.9 and 688μg/m^3) was recorded in the study at the Minnagar.

Similarly, the highest values of PM_{10}, PM_{100}, $PM_{2.5}$,SO_2 ,NO_2 and CO has been recorded in the Housing board and they were 564, 864, 218, 21.8 , 61.3 and 928 μg/m^3 respectively in October 2020. During November 2020, the highest values of PM_{100}, $PM_{2.5}$ and NO_2 happens to be at Housing board and they were 764, 139, and 54.7μg/m^3 respectively. The highest values of PM_{10} and SO_2 recorded in the Melamathur were 468 and 22.4 μg/m^3, the CO Values has been recorded in the Valajanagaram as 1114 μg/m^3. During December 2020, the highest values of PM_{10}, PM_{100}, $PM_{2.5}$,SO_2 ,NO_2 and CO has been recorded in the Housing board and they were 748, 868, 180, 22.4 , 61.4 and 942 μg/m^3 respectively.

Table 1: Summary of Ambient Air Quality Data in and around Ariyalur during January 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	112	278	88	21.0	33	720
THAMARAIKULAM (NE)	162	317	97	24.3	37	620
KALLANKURUCHI (E)	316	360	117	29.8	42	612
MINNAGAR (S)	328	475	160	27.3	51	1240
THAVUTHAIKULAM(SW)	124	370	71	21.3	38	1100
VALAJANAGARAM (SSE)	91	114	49	9.4	19.6	112
ALLINAGARAM (W)	64	72	34	6.8	17.3	140
HOUSING BOARD (SW)	147	129	58	12.6	25.9	210
MELAMATHUR (NW)	218	416	102	14.6	34.5	1340

Table 2: Summary of Ambient Air Quality Data in and around Ariyalur during February 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	112	216	112	12.3	26.2	305
THAMARAIKULAM(NE)	120	216	51	9.4	31.6	340
KALLANKURUCHI (E)	102	142	48	9.8	34.3	240
MINNAGAR (S)	312	424	124	17.3	51.4	710
THAVUTHAIKULAM(SW)	212	342	114	12.6	30.1	610
VALAJANAGARAM (SSE)	316	420	77	19.6	51.3	940
ALLINAGARAM (W)	142	214	80	24.7	31.6	980
HOUSING BOARD (SW)	417	518	151	21.6	41.6	510
MELAMATHUR (NW)	216	278	61	14.3	32.4	640

Table 3: Summary of Ambient Air Quality Data in and around Ariyalur during March 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	150	188	94	13.4	31.8	270
THAMARAIKULAM (NE)	114	154	44	14.8	27.4	210
KALLANKURUCHI (E)	94	108	40	13.7	37.8	170
MINNAGAR (S)	224	624	124	19.4	47.6	840
THAVUTHAIKULAM(SW)	210	138	84	15.4	41.2	520
VALAJANAGARAM (SSE)	224	212	74	21.7	51.6	720
ALLINAGARAM (W)	314	164	64	16.8	47.3	370
HOUSING BOARD (SW)	478	724	125	20.1	50.3	470
MELAMATHUR (NW)	164	142	54	13.6	44.0	420

Table 4: Summary of Ambient Air Quality Data in and around Ariyalur during April 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	114	142	74	14.3	29.4	210
THAMARAIKULAM (NE)	132	138	54	15.8	31.8	140
KALLANKURUCHI (E)	142	142	34	17.6	38.2	210
MINNAGAR (S)	148	414	112	20.1	51.3	640
THAVUTHAIKULAM (SW)	174	148	94	17.6	44.3	540
VALAJANAGARAM (SSE)	138	162	78	13.8	40.6	240
ALLINAGARAM (W)	114	188	88	13.6	34.3	430
HOUSING BOARD (SW)	840	628	134	13.5	41.3	940
MELAMATHUR (NW)	220	145	102	17.4	38.0	210

Table 5: Summary of Ambient Air Quality Data in and around Ariyalur during May 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	132	112	54	14.3	28	270
THAMARAIKULAM (NE)	89	132	62	16.8	34.8	310
KALLANKURUCHI (E)	84	84	54	13.8	31.7	460
MINNAGAR (S)	169	220	114	19.8	51.4	842
THAVUTHAIKULAM (SW)	174	210	68	14.8	48.4	514
VALAJANAGARAM (SSE)	112	214	86	15.3	37.3	510
ALLINAGARAM (W)	148	208	74	14.3	38.8	528
HOUSING BOARD (SW)	295	462	134	21.4	51.3	864
MELAMATHUR (NW)	140	198	74	15.6	44.6	540

Table 6: Summary of Ambient Air Quality Data in and around Ariyalur during June 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	82	128	54	14.3	27.4	216
THAMARAIKULAM (NE)	94	110	62	14.6	22.3	274
KALLANKURUCHI (E)	51	79	31	9.8	45.8	308
MINNAGAR (S)	152	240	124	18.6	41.8	516
THAVUTHAIKULAM (SW)	112	140	84	14.3	41.6	460
VALAJANAGARAM (SSE)	108	138	108	13.6	34.9	308
ALLINAGARAM (W)	96	144	74	14.3	27.8	428
HOUSING BOARD (SW)	214	416	138	24.8	49.8	716
MELAMATHUR (NW)	108	108	41	18.3	34.9	475

Table 7: Summary of Ambient Air Quality Data in and around Ariyalur during July 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	88	112	31	16.8	32.4	542
THAMARAIKULAM (NE)	74	102	48	14.3	27.8	408
KALLANKURUCHI (E)	64	84	49	11.8	27.8	612
MINNAGAR (S)	208	210	154	19.4	44.6	868
THAVUTHAIKULAM (SW)	154	215	83	16.4	34.8	368
VALAJANAGARAM (SSE)	148	216	74	16.2	31.7	416
ALLINAGARAM (W)	214	218	79	18.8	36.8	308
HOUSING BOARD (SW)	610	544	158	21.4	44.8	840
MELAMATHUR (NW)	194	213	54	16.3	31.6	516

Table 8: Summary of Ambient Air Quality Data in and around Ariyalur during August 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	88	128	34	16.3	27.8	320
THAMARAIKULAM (NE)	54	84	47	14.8	31.4	372
KALLANKURUCHI (E)	64	98	49	13.4	34.8	498
MINNAGAR (S)	168	208	120	21.4	44.2	614
THAVUTHAIKULAM (SW)	87	139	74	20.8	40.3	384
VALAJANAGARAM (SSE)	79	94	84	13.2	34.8	812
ALLINAGARAM (W)	108	135	63	16.3	24.8	762
HOUSING BOARD (SW)	288	538	132	22.8	54.4	734
MELAMATHUR (NW)	94	171	98	17.6	31.6	490

Table 9: Summary of Ambient Air Quality Data in and around Ariyalur during September 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	132	118	68	7.8	31.4	410
THAMARAIKULAM (NE)	84	132	31	7.9	32.8	278
KALLANKURUCHI (E)	80	84	34	15.8	37.8	208
MINNAGAR (S)	684	864	128	19.9	45.6	688
THAVUTHAIKULAM (SW)	208	328	108	12.4	47.8	628
VALAJANAGARAM (SSE)	164	218	81	11.2	37.4	416
ALLINAGARAM (W)	211	174	78	12.6	33.8	294
HOUSING BOARD (SW)	768	742	204	18.8	50.8	628
MELAMATHUR (NW)	172	134	51	14.3	34.3	414

Table 10: Summary of Ambient Air Quality Data in and around Ariyalur during October 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	84	214	38	14.3	34.8	374
THAMARAIKULAM (NE)	94	188	49	13.8	44.3	648
KALLANKURUCHI (E)	128	142	24	15.4	50.8	548
MINNAGAR (S)	506	762	142	21.8	54.3	694
THAVUTHAIKULAM (SW)	148	158	114	15.6	37.8	762
VALAJANAGARAM (SSE)	124	214	94	14.8	35.8	518
ALLINAGARAM (W)	148	218	98	17.6	44.8	544
HOUSING BOARD (SW)	564	864	218	21.8	61.3	928
MELAMATHUR (NW)	138	188	82	17.6	42.4	484

Table 11: Summary of Ambient Air Quality Data in and around Ariyalur during November 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	124	174	84	18.8	41.8	216
THAMARAIKULAM (NE)	168	208	58	21.4	44.6	420
KALLANKURUCHI (E)	124	211	49	14.6	34.8	518
MINNAGAR (S)	394	528	114	19.5	54.4	918
THAVUTHAIKULAM (SW)	160	210	89	15.3	46.8	714
VALAJANAGARAM (SSE)	212	238	74	19.8	38.8	1114
ALLINAGARAM (W)	138	148	47	14.3	49.4	498
HOUSING BOARD (SW)	468	764	139	15.6	54.7	868
MELAMATHUR (NW)	138	148	84	22.4	48.3	468

Table 12: Summary of Ambient Air Quality Data in and around Ariyalur during December 2020 (mean values)

AREA	PM_{10} (Mean value)	PM_{100} (Mean value)	$PM_{2.5}$ (Mean value)	SO_2 (Mean value)	NO_2 (Mean value)	CO (Mean value)
GOVINDHAPURAM (N)	214	214	62	11.8	31.8	518
THAMARAIKULAM (NE)	264	148	84	14.6	32	428
KALLANKURUCHI (E)	278	243	60	15.8	41.9	542
MINNAGAR (S)	518	674	158	21.6	48.6	842
THAVUTHAIKULAM (SW)	484	315	124	18.6	29.8	518
VALAJANAGARAM (SSE)	149	270	68	14.6	34.9	528
ALLINAGARAM (W)	218	164	104	17.8	54.8	619
HOUSING BOARD (SW)	748	868	180	22.4	61.4	942
MELAMATHUR (NW)	242	318	130	15.3	47.4	819

Almost all air pollution introduced by automobiles has been described as a "property infection." Sulfur dioxide, nitrogen dioxide and particulate matter (PM) are considered air poisons in India (Agarwal and Bhatnagar, 1991). Among international agricultural destinations, the best air crisis in urban areas is attributed to the unloading of vehicles that provide 40 and 80% of total air pollution (Ghoz et al., 2005). The full-size portion of the particulate matter comes from the surrounding main body of regular resources, including land, sea, and volcanoes (Limaye and Salvi, 2010). Furthermore, the particle problem can spread over great distances or even become suspended in the air after a while (Londahal et al., 2007).

Pandey etc. (1999) considered the vast aerial nature of the Indian city of Lucknow in terms of SPM, ranging from 583 / g / m3 to 3450□g / m3. The authors also cite vehicle infections as a source of infection. Agarwal and Khanum (1997) inspect the air near the Dala concrete processing plant in Uttar Pradesh, India. He announced that the SPM is 2 km from the fixation source and in addition, during the summer season intervals, high features were noted at one place, it is about 752 g / m3, the research website said. Is 0.5 km away. Offer canceled.

The results of the comparison are cited by Mohanty (1999), Joshi and Jain (2000), Jainti and Krishnamurthy (2006), Gupta and Sunita (1997), Agarwal and Khanum (1997), as well as by the transport of solid bags. - I am investigating the influence of Raw material as a hotspot for SPM. Therefore, a simple infection in this area can justify the height of the stack as well as the potential impact of logistics in addition to weather conditions. The behavior of parrots can increase the severity of pollution. (Rao and Rao Rao, 1989). From this belief, clearly, the modern boss movement that causes such an infection of PM10 is the solid commercial enterprises and the limestone quarry. Despite aging, PM10 should be controlled for power outages and realistic changes in activity. Equitable results have been explained by Chandra Sekran Ayatollah. (1996) and Prasad etc. (1997). Therefore, vehicle infections, mechanical infections mixed with domestic infections can bring a heightened toxicity into the surrounding air. Fly debris is transported by remote particles of trapped particles in pipe gases released from the combustion of coal. The particle dimensions of the flying particles may be more than minus µ three meters. It does not drain coal completely, and the carbon content of fly residues can be exchanged between 5 and 20%, although in some instances it can increase by as much as 50%. In addition, large amounts of minerals within the coal can also occur in fly particles (Tangarasu, 2002). Concrete assembly industries have decided to make a significant contribution to the problem of air pollution, as it leads to emissions wells.

The emission exit of the concrete production line is handled by some calculations, for example, concrete coding measures, sort control gadgets, the productivity of climate and geographical conditions, plant life and soil-to-air poisoning. Are in sync. In India, some have considered the high concrete collapse round concrete processing vegetation (Manju et.al., 2000, Sundar et.al., 2000, Anandan et.al., 2019, Ashok et.al., 2018, 2019, Vasanthy and Jeganathan 2008, 2009).

Pandey et al. (1999) examined the nature of the air surrounding the city of Lucknow, India, such as some distances from SPM to 583 / g / m3 to 3450□g / m3, where manufacturers also cited vehicle infections and fragrances. Also comes. Pollution. The observatory is closely observed to be the typical model three for the January, February, and November period, and the place is by all accounts, during the April period and during the significant months, especially the June and August gust. September, October and December are infected with that honor. Also, there is very little coverage during day and night honors.

CONCLUSION

The local habitat around the Ariyalur concrete plant is constantly collapsing with the spread of the concrete kiln through the smoke stack. All the vegetation is made up of all the money that is gray-white, about five kilometers around the concrete processing plant. In common perception, the good surrounding area of Ariyalur represents the highest probability of PM10 fixation. Often PM10 is left directly airborne in a way that is not an unusual and anthropomorphic physical activity. The improved stabilization of PM10 at these sites can be attributed to widespread vehicular infection due to the expanded population and, furthermore, to sports activities contemporaneous with limestone mining. Airborne infection is an international problem, therefore it simply cannot be favored locally, it is imperative and essential to stay close to sports. The main drivers of airborne infections are mainly due to rapidly developing motors, stuck traffic signs, and blocked roads. The metropolitan and public mindset systems rely heavily on winning the turn of this event and reducing changes in the surrounding air. Studies show that anthropogenic physical activity, especially modern mined physical activity and vehicle pollution, is responsible for a difficult group of particles in the Ariel region. Advanced checks can count the right size pieces as a framework for welfare precautions and as a way to increase stress on pollution in line with current proposals. In these areas, it may be necessary to promote improvements in sustainability documentation to mark seats for the use of static ecological governance guidelines / violations.

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