

## **National Ambient Noise Monitoring Programme (NANMP) :**

As per section 5.2.8 (IV) of National Environmental Policy (NEP)-2006, CPCB is in the process of developing Noise Monitoring Network in India. It has decided to include ambient noise as a regular parameter for monitoring in specified urban areas.

The Honøble Minister for Environment and Forests, Govt of India has announced the road map for systematic monitoring of ambient noise national noise monitoring network covering 25 cities by 2012 to make Indian cities less noisy. Karnataka is one among the State and in Bangalore it is proposed to establish 10 continuous monitoring stations. For every continuous monitoring station CPCB will provide 100% capital cost and 50% of operation and maintenance cost. It was proposed to establish five monitoring stations during the reporting year 2010-11 and the remaining five stations is planned for the year 2011-12.

In the 1<sup>st</sup> phase the State Board has received five monitoring equipments from CPCB and installed at the following locations. The proposed locations for 2<sup>nd</sup> phase is also indicated below:

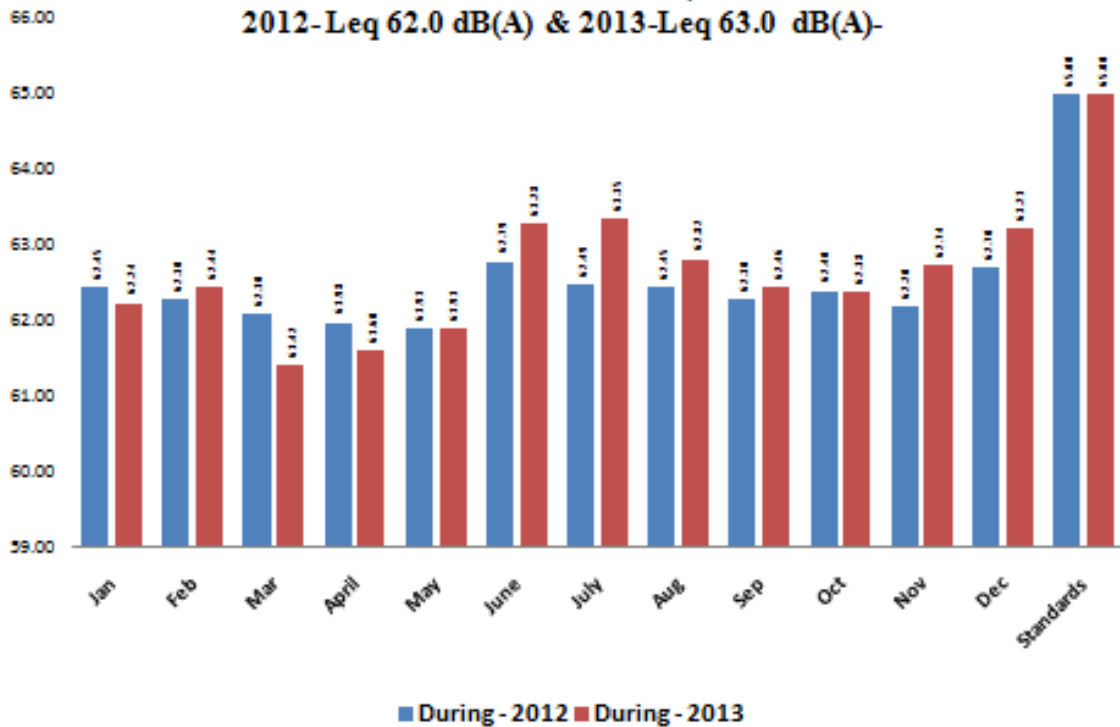


### **Noise monitoring stations installed and working**

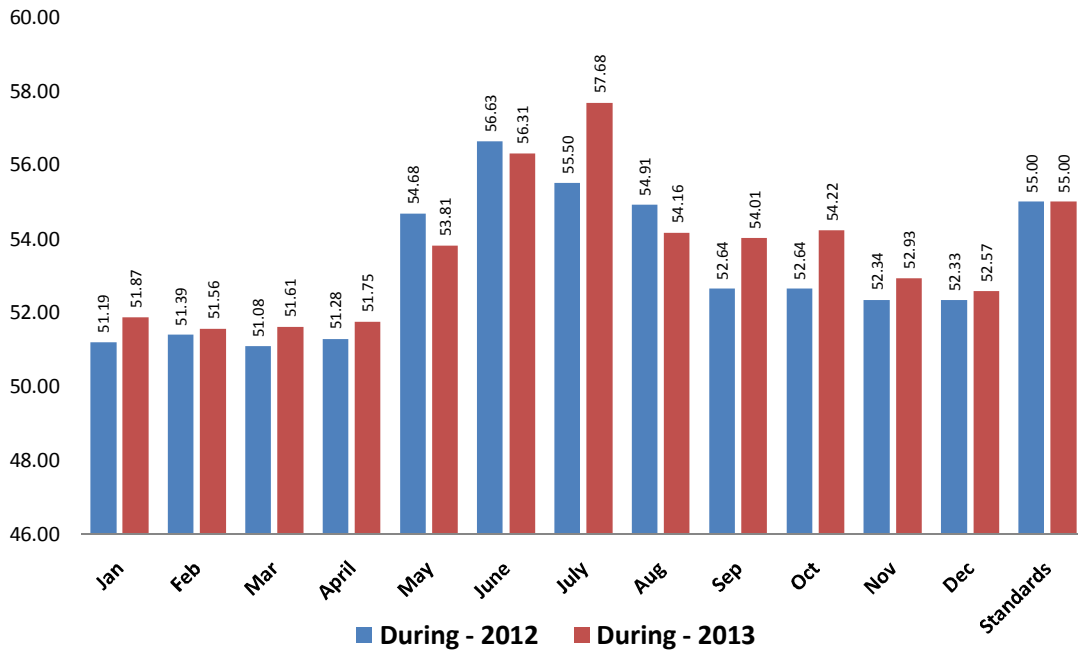
<b>Sl No.</b>	<b>Station Name</b>	<b>Type of Area</b>	<b>Location</b>	<b>Concerned RO's</b>
1	KSPCB,Parisara bhavan,# 49 Church Street,Bangalore. (City Railway Station)	Commer cial area	KSPCB head Office	City-II
2.	KSPCB office Building, Nisarga	Resident	CAAQM station of	City-III

	Bhavan, Sanegravannahalli, Bangalore.	ial area	KSPCB	
3.	CAAQM at 29 <sup>th</sup> main Madival lake, BTM II <sup>nd</sup> stage, Bangalore	Resident ial area	CAAQM station of CPCB	City-I
4.	Ace Manufacturing System, Peenya Industrial Area, Bangalore-58.	Industria l Area,	CAAQM station of CPCB	Peenya
5.	BWSSB site No. 137. Kadubidnahalli, Bangalore	Commer cial Area	CAAQM station of CPCB	East óII

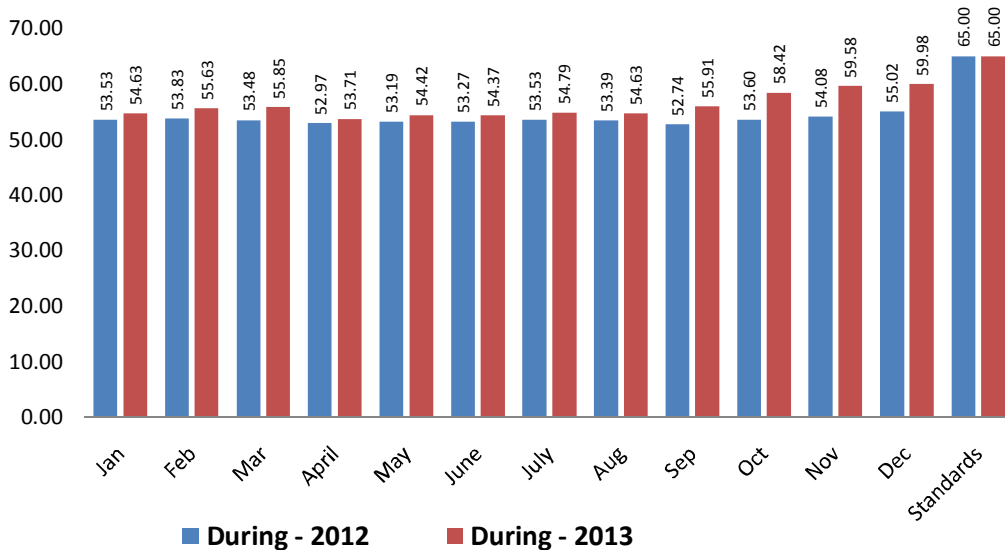
**Continuous ambient noise monitoring data at Parisara Bhavana for 2012 and 2013, 2012-Leq 62.0 dB(A) & 2013-Leq 63.0 dB(A)-**



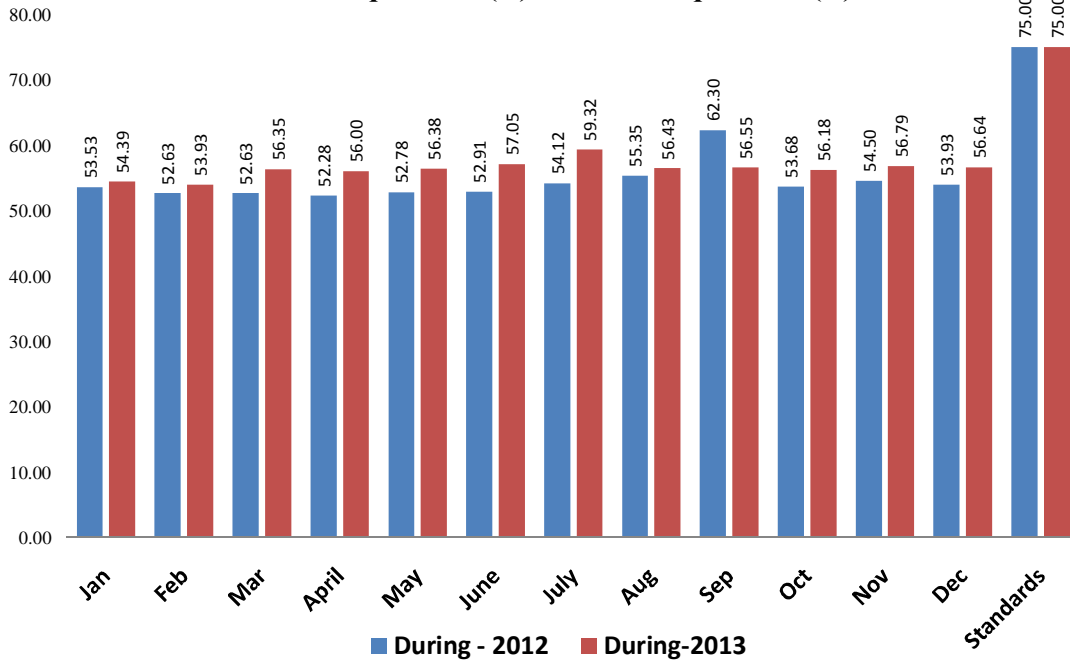
**Continuous ambient noise data at Nisarga Bhavan  
for 2012 and 2013  
2012- Leq -53.0 dB(A) & 2013- Leq -53.5 dB(A)**



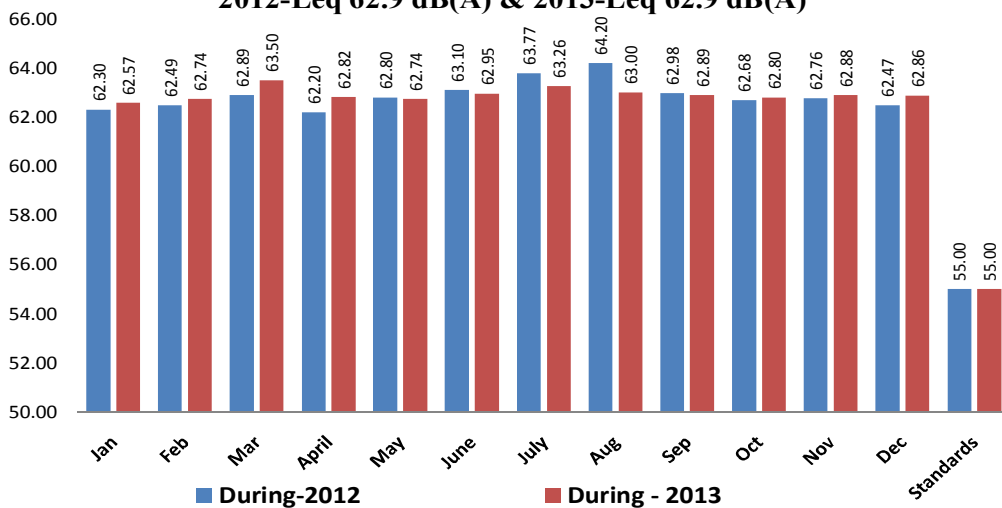
**Continuous ambient noise data at Marathahalli  
for 2012 and 2013,  
2012- Leq 53.6dB(A) & 2013- Leq 56.0 dB(A)**



**Continuous ambient noise data at Peenya  
for 2012 and 2013  
2012- Leq 54.2 dB(A) & 2013- Leq 56.3 dB(A)**



**Continuous ambient noise data at BTM Layout  
for 2012 and 2013  
2012-Leq 62.9 dB(A) & 2013-Leq 62.9 dB(A)**



### **Ambient Noise monitoring Results of Bangalore city Deepavali - 2013**

Karnataka State Pollution Control Board has conducted ambient noise level monitoring for short duration as per C.P.C.B guidelines (6.00 PM to 12.00 PM) at 13 locations in Bangalore, on Normal days and during Deepavali 2013. The noise level data is presented in the table

#### **Ambient Noise Level at four different places in Bangalore city during Deepavali days in the year 2013 (All the average values are in dB (A))**

Sl No	Place of Monitoring	National Noise Limits	Zone	Normal days 29.10.2013	Deepavali (2 <sup>nd</sup> & 4 <sup>th</sup> Nov .2013)	Compare to Normal days
1.	Peenya	75	I	57.82	59.8	3.4 % Increase
2.	ParisaraBhavan	65	C	62.1	61.9	0.3 % Decrease
3.	Jalahalli Cross,	65	C	69.7	72.2	3.5 % Increase
4.	BMTC Depot. Jayanagara 4 <sup>th</sup> Block	65	C	70.7	73.65	4.2 % Increase
5.	Nisarga Bhavan	55	R	51.8	52.3	0.9 % Increase
6.	BTM Layout	55	R	63.2	62.9	0.4 % Decrease
7.	Marathahalli	55	R	60.21	61.8	2.6 % Increase
8.	Vijayanagar Club	55	R	62.9	67.3	6.9 % Increase
9.	Laggere Cross	65	R	60.0	67.05	11.8 % Increase
10.	Indiranagar ESI Hospital	50	S	63.5	69.2	8.9 % Increase
11.	Fortis Hospital, Nagarabhavi.	50	S	58.7	62.7	6.8 % Increase
12.	Unani Hospital	50	S	62.5	65.9	5.4 % Increase
13.	Vidhath Educational Trust, Anekal	50	S	61.7	64.7	4.8 % Increase

**Note :** Industrial Area , R – Residential Area, C – Commercial Area, S –Sensitive Area

#### **Observation:**

1. The Board has measured the Noise level at 13 places as per the CPCB guidelines.
2. Out of 13 Places 11 places measured noise levels have increased by 0.9 to 11.8 % during Deepavali days (2<sup>nd</sup> & 4<sup>th</sup> Nov 2013) -when compare to the normal days . (29-10-2013)

#### **Comparison of Ambient Noise Level on Deepavali days during the year 2012 & 2013 (All the average values are in dB (A))**

Sl No	Place of Monitoring	National Noise Limits	Zone	Deepavali 2012	Deepavali 2013	D/I, compared to 2012 Deepavali
1	Peenya	75	I	53.0	59.8	12.8 % Increase
2	ParisaraBhavan	65	C	73.0	61.9	15.0 % Decrease
3	Vijayanagar Club	55	R	71.5	67.3	5.8 % Decrease
4	NisargaBhavan	55	R	64.0	52.3	18.0 % Decrease
5	BTM Layout	55	R	62.5	62.9	0.6 % Increase
6	Marathahalli	55	R	56.0	61.8	10.3 % Increase
7	Indiranagar ESIH	50	S	66.8	69.2	3.5 % Increase
8	Forties Hospital , Nagarabhavi	50	S	68.1	62.7	7.9 % Decrease
						12.0 % decrease

**Note : Industrial Area , R – Residential Area, C – Commercial Area, S –Sensitive Area**

**Observation:**

1. The monitored data indicates that the measured noise values have decreased by 12.0 % when compare to Deepavali 2012 data . However there is an increase by 6.8 % in some locations

## Ambient Air Quality - Deepavali 2013

Karnataka State Pollution Control Board has monitored the ambient air quality using continuous ambient air quality monitoring system at two locations and manual monitoring stations at 13 locations (11 manual stations and 2 CAAQMS) in Bangalore city on occasion of Deepavali festival 2013. To see the impact of bursting of crackers etc. on air quality, round-the-clock ( 24 Hourly) air quality monitoring was carried out. The ambient air quality data is as follows .

**Status of ambient air quality monitored using CAAQMS in Bangalore city during Deepavali 2013(All values are in microgram per cubic meter)**

Name of the city	Location	Area	NAAQ Standards			Normal day (29.10.2013)			Average values of pollutants during Deepavali 2013 (2 <sup>nd</sup> & 4 <sup>th</sup> -Nov-2013)			Increase /Decrease (%)		
			SO2 µg/M3	NO2 µg/M3	RSPM µg/M3	SO2 µg/M3	NO2 µg/M3	RSPM µg/M3	SO2 µg/M3	NO2 µg/M3	RSPM µg/M3	SO2 µg/M3	NO2 µg/M3	RSPM µg/M3
Bangalore	Victoria Hospital, Bangalore	S	80.0	80.0	100.0	13.5	29.2	70.0	18.6	36.2	87.0	37.8 (I)	24.0 (I)	24.3 (I)
	Indiragandhi Child Care Centre	S	80.0	80.0	100.0	31.1	28.6	67.0	29.9	31.3	127.0	3.9 D	9.4 (I)	89.6 (I)
	Fortis Hospital, Nagarabhavi	S	80.0	80.0	100.0	15.9	30.0	37.0	20.5	40.0	65.0	28.9 (I)	33.3 (I)	75.7 (I)
	Madhavachari House, Kazisonnahalli	R	80.0	80.0	100.0	13.3	29.2	53.0	18.7	31.3	36.0	40.6 (I)	7.2 (I)	32.1 (D)
	Amco Batteries Bangalore	M	80.0	80.0	100.0	14.0	30.6	107.0	19.4	34.3	109.0	38.6 (I)	12.1 (I)	1.9 (I)
	Yeshwanthpur	M	80.0	80.0	100.0	12.9	28.6	97.0	24.8	35.7	117.0	92.2 (I)	24.8 (I)	20.6 (I)
	DTDC House, Victoria Road	M	80.0	80.0	100.0	12.9	29.0	88.0	21.1	40.8	80.0	63.6 (I)	40.7 (I)	9.1 (D)
	Central Silk Board.	M	80.0	80.0	100.0	13.3	29.3	127.0	25.6	40.3	134.0	92.5 (I)	23.7 (I)	5.5 (I)
	City Railway Station Bangalore	M	80.0	80.0	100.0	7.4	23.3	51.0	8.9	19.6	42.0	20.3 (I)	15.9 (D)	17.6 (D)
	S.G.Halli .KSPCB Premesis	M	80.0	80.0	100.0	7.6	28.1	23.0	9.3	15.2	24.0	22.4 (I)	45.9 (D)	4.3 (I)
Graphite India, Bangalore	I	80.0	80.0	100.0	16.4	29.9	259.0	21.6	37.1	134.0	31.7 (I)	24.1 (I)	48.3 (D)	

	KHB Indl Area Bangalore	<b>I</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	14.8	30.5	<b>132.0</b>	23.1	33.1	84.0	51.6 (I)	8.5 (I)	36.4 (D)
												<b>47.3</b>	<b>23.0</b>	<b>31.7</b>
												<b>34.0% increase</b>		

**Comparison of ambient air quality during the year 2012 and 2013 Deepavali Festival in Bangalore city  
(All values are in microgram per cubic meter),**

Name of the city	Location	Area	NAAQ Standards			Average values of air pollutants during Deepavali 2012			Average values of air pollutants during Deepavali 2013			Increase /Decrease (%)		
			SO2 µg/M3	NO2 µg/M3	RSPM µg/M3	SO2 µg/M3	NO2 µg/M3	RSPM µg/M3	SO2 µg/M3	NO2 µg/M3	RSPM µg/M3	SO2 µg/M3	NO2 µg/M3	RSPM µg/M3
Bangalore	Victoria Hospital, Bangalore	<b>S</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	18.1	36.3	<b>186.0</b>	18.6	36.2	87.0	2.8 (I)	0.3 (D)	53.2 (D)
	<b>Indiragandhi Child Care Centre</b>	<b>S</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	<b>14.4</b>	<b>31.0</b>	<b>94.0</b>	<b>29.9</b>	<b>31.3</b>	<b>127.0</b>	<b>107 (I)</b>	<b>1.0 (D)</b>	<b>35.1 (I)</b>
	Fortis Hospital, Nagarabhavi	<b>S</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	18.7	36.5	94.0	20.5	40.0	65.0	<b>9.6 (I)</b>	<b>9.6(I)</b>	<b>30.9 (D)</b>
	Kazisonnahalli, Hoskote	<b>R</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	13.7	30.8	55.0	18.7	31.3	36.0(I)	36.5 (I)	1.6 (I)	34.5 (D)
	Yeshwanthpur	<b>M</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	18.4	35.9	67.0	24.8	35.7	<b>117.0</b>	<b>34.8 (I)</b>	<b>0.6 (D)</b>	<b>74.6 (I)</b>
	Amco Batteries Bangalore	<b>M</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	14.9	33.4	<b>131.0</b>	19.4	34.3	<b>109.0</b>	<b>30.2 (I)</b>	<b>2.7 (I)</b>	<b>16.8 (D)</b>
	<b>DTDC House, Victoria Road</b>	<b>M</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	<b>17.2</b>	<b>33.3</b>	<b>62.0</b>	<b>21.1</b>	<b>40.8</b>	<b>80.0</b>	<b>22.7 (I)</b>	<b>22.5 (I)</b>	<b>29.0 (I)</b>
	Central Silk Board. Hosur Road	<b>M</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	18.8	37.9	<b>199.0</b>	25.6	40.3	<b>134.0</b>	<b>36.2 (I)</b>	<b>6.3 (I)</b>	<b>32.7(D)</b>
	City Railway Station Bangalore	<b>M</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	9.0	37.0	130.0	8.9	19.6	42.0	1.2 (D)	47.0 (D)	67.7(D)
	S.G.Halli .KSPCB Premesis	<b>M</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	9.3	33.0	40.0	9.3	<b>15.2</b>	24.0	0	53.9 (D)	40.0 (D)
<b>Graphite India, Bangalore</b>	<b>I</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	<b>17.3</b>	<b>34.9</b>	<b>122.0</b>	<b>21.6</b>	<b>37.1</b>	<b>134.0</b>	<b>24.9 (I)</b>	<b>6.3 (I)</b>	<b>9.8 (I)</b>	
KHB Indl Area Bangalore	<b>I</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	18.7	33.1	<b>105.0</b>	23.1	33.1	84.0	23.5 (I)	0	20 (D)	
Peenya Indl Area Bangalore	<b>I</b>	<b>80.0</b>	<b>80.0</b>	<b>100.0</b>	16.6	34.5	<b>116.0</b>	25.6	36.0	<b>115.0</b>	54.2 (I)	4.3 (I)	0.9 (D)	



														20.6 (D)	42.6 (D)
														<b>31.6 % Decrease</b>	

**Note:** 1. SO<sub>2</sub>: Sulphur dioxide, NO<sub>2</sub>: Nitrogen dioxide, and PM -10: particulate matter (less than 10 µm) or less than PM10.  
2. I- Increase, D- Decrease, Normal Day: 29<sup>th</sup> Oct 2013 and 2-11-2013 & 4-11-2013 Deepavali days.

**Observations :**

1. The measured SO<sub>2</sub> and NO<sub>2</sub> values during normal days (29.10.2013) and Deepavali days (2<sup>nd</sup> and 4<sup>th</sup> Nov-2013) have not exceeded the National limit of( SO<sub>2</sub> -80 .0 µg/M3 and NO<sub>2</sub>-80 .0 µg/M3). However there is an increase by 47.0 % and 23.0 % respectively
2. The Measured Particulate Matter (PM-10) have exceeded the National Limit at 4 Places before Deepavali and at 5 Places during Deepavali.
3. However, there is an increase of 34.0 % pollutants level during Deepavali
4. The Air quality monitoring data during Deepavali 2013 has compared with last year Deepavali 2012. It is observed that there is an decrease by 32.0 % when compare to Deepavali 2012 data .

Karnataka State Pollution Control Board has monitored the ambient noise quality monitored during Deepavali 2013 at major cities of the State . The data is as follows ..

